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USAID ASSIST Project

Annual Performance Monitoring Report FY14

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DISCLAIMER
This performance monitoring report was authored by University Research Co., LLC (URC). The views expressed do not necessarily reflect the views of the United States Agency for International Development or the United States Government.

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For more information on the work of the USAID ASSIST Project, please visit the ASSIST website or write assist-info@urc-chs.com.

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ACRONYMS

ACS	Acute coronary syndrome
ACSM	Advocacy, communication, and social mobilization
AE	Adverse events
AIDS	Acquired immunodeficiency syndrome

AIMGAPS	Assuring Infants and Mothers Get All PMTCT Services
AMTSL	Active management of the third stage of labor
AMURT	Ananda Marga Universal Relief Team
ANC	Antenatal care
ANM	Auxiliary nurse midwives
ANPPCAN	African Network for the Protection and Prevention of Child Abuse and Neglect
AOR	Agreement Officer's Representative
APHIA	AIDS, Population, and Health Integrated Assistance
ART	Antiretroviral therapy
ARV	Antiretroviral virus
ASHA	Accredited Social Health Activists (India)
ASSIST	USAID Applying Science to Strengthen and Improve Systems Project
AWW	Anganwadi workers
BCC	Behavior change communication
BICU	Bluefields Indian & Caribbean University
BMJ	British Medical Journal
BP	Blood pressure
BPI	Brief physician interventions
CAD	Coronary artery disease
CBO	Community-based organizations
CCM	Chronic Care Model
CCPC	Community child protection committees
CDC	U.S. Centers for Disease Control and Prevention
CDF	Constituency Development Fund
CDO	Community Development Officers
CDO	Community Development Officers
CHBC	Community home-based care
CHC	Community health center
CHMT	Council Health Management Team (Tanzania)
CHMT	County Health Management Team (Kenya)
CHS	Community Health Services (Kenya)
CHV	Community health volunteer
CHW	Community health worker
CME	Continuing medical education
CMS	Central Medical Stores
COE	Center of Excellence
COP	Chief of Party
COPD	Chronic obstructive pulmonary disease
COR	Continuum of Response
CP	Child protection
CQI	Continuous quality improvement
CRESAC	*Centre Régional d'Evaluation en Education, Environnement, Santé et d'Accréditation en Afrique* (Regional Center for Education and Environment Evaluation and Accreditation in Africa)
CRS	Catholic Relief Services

CSI	Child Status Index
CSO	Civil society organization
CTC	Care and treatment center
CVD	Cardiovascular disease
DBS	Dried blood spot
DCS	Department of Children Services (Kenya)
DGHS	Director General of Health Services
DHMT	District Health Management Team
DHO	District Health Office
DIC	District Improvement Coordinator
DIPE	National Health Strategic Information Department
DM	Diabetes mellitus
DNA	Deoxyribonucleic acid
DOH	Department of Health
DOTS	Directly observed therapy, short-course
DQA	Data quality assessment
DRCHCO	District Reproductive and Child Health Coordinators
DR-TB	Drug-resistant tuberculosis
DSW	Department of Social Welfare
EBF	Exclusive breastfeeding
EC	Eastern Cape
ECEA	Effectiveness and Cost-Effectiveness Assessment
EGPAF	Elizabeth Glaser Pediatric AIDS Foundation
EHCP	Essential Health Care Package
EID	Early infant diagnosis
EmONC	Emergency obstetric and neonatal care
eMTCT	Elimination of mother-to-child transmission of HIV
ENC	Essential newborn care
EONC	Essential obstetric and newborn care
EQA	External quality assessment
FANTA	Food and Nutrition Technical Assistance Project
FCT	Federal Capital Territory
FDC	Fixed-dosed combination
FMWASD	Federal Ministry of Women Affairs and Social Development
FOGSI	Federation of Obstetrics & Gynecological Societies of India
FP	Family planning
FY	Fiscal year
GAMPHA	Georgian American Medical and Public Health Association
GIS	Geographic information system
GOI	Government of India
Hb	Hemoglobin
HBB	Helping Babies Breathe
HBC	Home-based care
HCI	USAID Health Care Improvement Project

HCW	Health care worker
HEI	HIV-exposed infant
HES	Household economic strengthening
HIA	Health Initiatives Africa
HIDN	USAID Health, Infectious Disease, and Nutrition Division
HIV	Human immunodeficiency virus
HMIS	Health management information system
HOD	Heads of Departments
HPP	USAID Health Policy Project
HQ	Headquarters
HR	Human resources
HRH	Human resources for health
HSS	Health systems strengthening
HTC	HIV testing and counseling
HTW	Health Through Walls
HVFI	Hope Valley Family Initiative
HWD	Health workforce development
IAP	Indian Academy of Pediatrics
IBESR	*Institut du Bien Etre Social et de la Recherche* (Institute for Social Welfare and Research) (Haiti)
ICAP	International Center for AIDS Care and Treatment Programs
ICF	Intensified case finding
ICOP	Inuka community-based project
IEC	Information, education, and communication
IHD	Ischemic heart disease
IP	Implementing partners
IPC	Infection prevention and control
IPT	Isoniazid preventive therapy
IRB	Institutional Review Board
IS&HCWM	Injection safety and health care waste management
IST	In-service training
I-TECH	International Training and Education Center for Health
IUD	Intrauterine device
IYCF	Infant and young child feeding
JHU CCP	Johns Hopkins University Center for Communication Programs
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
KQMH	Kenya Quality Model for Health
KZN	KwaZulu-Natal
LIFT	Livelihoods and Food Security Technical Assistance Project
LNSP	*Laboratoire National de Santé Publique* (National Public Health Laboratory)

LTFU	Lost to follow-up
M&E	Monitoring and evaluation
MDG	Millennium Development Goals
MDR-TB	Multidrug-resistant tuberculosis
MGLSD	Ministry of Gender, Labor and Social Development
MGSO4	Magnesium sulfate
MLSS&S	Ministry of Labor, Social Security, and Services (Kenya)
MMAS	Ministry of Women and Social Action (Mozambique)
MMR	Maternal mortality rate
MMRI	Maternal Mortality Reduction Initiative
MNCH	Maternal, newborn, and child health
MOGCSW	Ministry of Gender, Children and Social Welfare
MOH	Ministry of Health
MOHSW	Ministry of Health and Social Welfare
MOU	Memorandum of understanding
MP	Mpumalanga
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
NASCOP	National AIDS and STI Control Program (Kenya)
NCD	Non-communicable diseases
NCDC	National Center for Disease Control and Public Health (Georgia)
NCS	National Core Standards
NGO	Non-governmental organization
NHRM	National Rural Health Mission (India)
NHSRC	National Health System Resource Center
NIH	National Institute of Health
NIHFW	National Institute of Health and Family Welfare
NMAPE	National Medical Academy of Postgraduate Education
NSP	National Strategic Plan
NTCP	National Tuberculosis Control Program
NTF	National Task Force
NVP	Nevirapine
OHA	USAID Office of HIV/AIDS
OPD	Outpatient department
OVC	Orphans and vulnerable children
PCR	Polymerase chain reaction
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)
PIP	Program Implementation Plan
PITC	Provider-initiated HIV testing and counseling
PLHIV	Persons living with HIV
PMTCT	Prevention of mother-to-child transmission of HIV
PNC	Postnatal care
PNLS	National AIDS Control Program (Burundi)
PPFP	Post-partum family planning
PPH	Post-partum hemorrhage
PSS	Psychosocial support
Q1-4	Quarter 1 to 4
QA	Quality assurance
QAIPC	Quality Assurance Infection Prevention and Control
QI	Quality improvement
QIF &SP	Quality Improvement Framework and Strategic Plan
QIT	Quality improvement team
R&E	Research and evaluation
RCH	Reproductive and child health
RCQHC	Regional Center for Quality in Health Care
REPPSI	Regional Psychosocial Support Initiative
RHMT	Regional Health Management Team
RMNCH+A	Reproductive, Maternal, Neonatal, Child, and Adolescent Health (India)
RTI	Respiratory tract infection
SADC	Southern Africa Development Community
SCI	Save the Children International
SDS	Service Delivery and Safety Department
SES	Standard evaluation system
SLIPTA	Stepwise Laboratory Improvement Process Towards Accreditation
SMaCKM	Safe Male Circumcision Knowledge Management
SMC	Safe male circumcision
SMGL	Saving Mothers Giving Life
SOP	Standard operating procedures
SPAQS	*Service de la Promotion de l'Assurance Qualité en Santé* (Health Care Quality Assurance Promotion Services (Cote d'Ivoire)
SRH	Sexual and Reproductive Health
STI	Sexually transmitted infection
TA	Technical assistance
TB	Tuberculosis
TBD	To be determined
THPS	Tanzania Health Promotion Services
TOT	Training of trainers
TPS	*Technicien de Promotion de la Santé* (Health promotion technician)
TWG	Technical working group
UGM	Umbrella Grant Mechanism

UHC	Universal health coverage
UI-CFW	Universitas Indonesia (UI) – Center for Family Welfare
UNAN	*Universidad Nacional Autónoma de Nicaragua* (National Autonomous University of Nicaragua)
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
VCO	Volunteer Children Officers
VHT	Village Health Team
VMMC	Voluntary male medical circumcision
VSL	Voluntary savings and loan
VSLA	Village savings and loan associations
WHO	World Health Organization
WI-HER	Women Influencing Health Education and Rule of Law
YCC	Young Child Care

EXECUTIVE SUMMARY

University Research Co., LLC (URC) and its partners have completed the second year of implementation of the USAID Applying Science to Strengthen and Improve Systems (ASSIST) Project. This report is the fourth 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 2014 (FY14).

Objective of USAID ASSIST: 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.

Scale of work during FY14: During FY14, USAID ASSIST provided assistance in 24 countries through field and core funding. Twenty-one of the countries were funded through field support: Botswana, Burundi, Cambodia, Cote d'Ivoire, Democratic Republic of Congo, Georgia, Haiti, India, Indonesia, Kenya, Lesotho, Malawi, Mali, Mozambique, Nicaragua, Nigeria, South Africa, Swaziland, Tanzania, Uganda, and Zambia. Activities in seven countries were supported through core funds. Funds from the USAID Office of HIV/AIDS supported activities in community health and health workforce development in Uganda and Tanzania; HIV and AIDS activities in Uganda, Tanzania, and Swaziland; nutrition assessment, counselling, and support in Malawi; and technical leadership activities for the Partnership for HIV-Free Survival, which ASSIST is supporting in Tanzania, Uganda, Kenya, Lesotho, and Mozambique. USAID cross-bureau-funded activities, through the Office of Health Systems, supported family planning activities in Niger and pilot maternal and child health activities in Mali and Senegal. In addition, cross-bureau funds supported maternal, neonatal, and child health activities in Uganda as well as regional initiatives in the Latin American and East/Central/Southern Africa regions as well as mHealth and non-communicable disease (NCD) prevention and treatment activities. The project also provided technical assistance to the Regional Center for Quality in Health Care with field support from the East Africa Region and assistance in Ukraine with Europe and Eurasia Bureau funding.

To support the project's learning agenda, ASSIST provided technical assistance in knowledge

management (KM) to field teams in Tanzania, Kenya, Uganda, Malawi, and India to strengthen staff capacity in KM and assist technical teams to incorporate KM approaches in their work. In addition, in-person training was provided to country teams in Georgia, Uganda, and Tanzania to integrate gender considerations into their improvement work. Ongoing gender support was provided to other 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 went live and the ASSIST Facebook page was launched in March 2014, and the ASSIST Twitter page gained many new followers.

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 FY14, the R&E team supported country-led research programs in eight countries (Burundi, Kenya, India, Mali, Nigeria, Swaziland, Tanzania, Uganda, and Ukraine) as well as a multi-country study on orphans and vulnerable children in Africa. The R&E team also provided technical assistance to India, Uganda, Kenya, and Burundi on validation of their improvement indicators as well as collecting data from control group from studies in Uganda.

Major global technical leadership activities included: working with countries to increase the extent to which gender is being integrated into their work plans and activities; the significant contribution of ASSIST to the development of the *FY2014 PEPFAR Quality Strategy: Phase I: Institutionalization of Countries' Ability to Improve HIV Clinical Programs*, published in March 2014; Dr. Rashad Massoud co-chairing the Global Human Resources for Health Strategy Task Team working group on Quality Improvement and Regulation; convening a new working group on the quality of care in the context of Universal Health Coverage (UHC), which is chaired by the WHO Service Delivery and Safety Department and seeks to define an action agenda for the partners to take forward to assure high quality UHC; hosting the WHO's Scoping Consultation Meeting on strengthening quality of HIV clinical services; contributing to the Advisory Board for the 2015 WHO Global Report on Quality and Safety; providing expert consultation on the design and implementation of the new WHO and UNICEF-sponsored global "Every Mother Every Newborn" quality intiative; and working with in-country teams on making the integrated design and measurement of country-level improvement interventions more rigorous.

Results:

- Publications: In FY14, project staff published four peer-reviewed articles; 12 case studies; 11 technical reports; 21 flyers and short reports; and 8 guides for country institutions.
- Presentations: During FY14, ASSIST staff made 65 oral presentations and presented 21 posters featuring ASSIST-related results and improvement methods at regional and international conferences, thereby sharing knowledge of lessons learned from the use of modern improvement approaches.
- Research and evaluation studies: As of the end of FY14, the project has developed 18 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, PMTCT, HIV care and treatment, TB-HIV case management, and NCD services.

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. In FY14, ASSIST received five different modifications with additional funding for continuing and new scopes of work throughout the year, presenting a challenge in terms of planning and resourcing the work. This has consequences for the timing and speed by which project activities can be implemented. More serious consequences can happen if an activity goes into closedown mode and is then expected to ramp up. The staffing implications of such erratic timing of funding makes managing the work and paying due diligence to our ASSIST staff very difficult in view of the host country labor law requirements we also have to abide by. Moreover, the ASSIST Project and URC have been put in the risky financial position of forward funding activities in order not to lose momentum of some mission- or core-funded activities and not have to re-start project activities from the beginning if and when funds are made available.

1 Field Support-Funded Activities

AFRICA

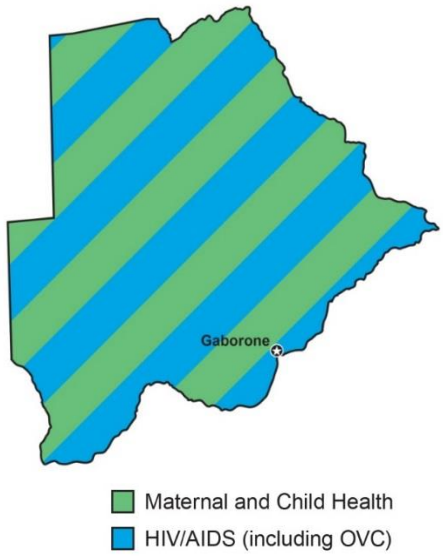
BOTSWANA

BACKGROUND

USAID ASSIST started working in Botswana in January 2013, building on planning activities conducted in 2012 through the USAID Health Care Improvement (HCI) Project. ASSIST is supporting the Ministry of Health (MOH) in pursuing its national level goal of reducing maternal mortality from 160 to 80 per 100,000 live births (MDG5), setting a clear implementation schedule of quality improvement (QI) activities with explicit delegation of responsibilities, and aligning activities at all levels to meet the national level goal.

Botswana has made serious investments in the health care sector during the last several years. Multiple improvement frameworks under various names have been developed. However, despite these efforts, the country is not seeing an improvement in key health indicators. The maternal mortality rate (MMR) increased from 163 per 100,000 live births in 2010 to 189 per 100 000 live births in 2011. The top three causes of maternal death were severe pre-eclampsia/eclampsia, post-partum hemorrhage (PPH) and post-abortion complications. The Government of Botswana therefore has decided to focus on addressing maternal and neonatal mortality and asked ASSIST for support. ASSIST supports the initiative with a National Coordinator for the initiative in country, a senior QI consultant that provides coaching and capacity building with monthly visits to different districts in the country, as well as high level technical assistance from URC. The MOH appointed 11 midwife coordinators to cover the coordination of QI activities in the 26 health districts in the country and provides the logistic support for the implementation of the activities. The focus of QI activities are implementation of evidence-based, high-impact interventions including: reduction of post-partum hemorrhage through active management of the third stage of labor (AMTSL); promotion of monitoring fourth stage of labor to identify early onset of complications that require immediate intervention; immediate administration of magnesium sulphate in patients with pre-eclampsia/eclampsia; and the immediate uterine evacuation of products resulting from complicated incomplete abortion within two hours of the diagnosis.

Scale of USAID ASSIST's Work in Botswana



MOH

101 facilities

84 Quality Improvement Teams

~49,047 out of 10,557,259

PROGRAM OVERVIEW

Activities	What are we trying to accomplish?	At what scale?	Improvement Activity	Activity
1. National Maternal Mortality Reduction Initiative	• Reduce maternal mortality through implementation of evidence-based high-impact interventions with focus on: ○ Obstetric best practices ○ PPH management ○ PE/E management ○ Post abortion complications management	Countrywide (26 Health Districts) Coverage: 50,048 live births (2012) QI teams: 84 QI teams formed (Sep 2014) out of 101 QI teams expected to be formed Facilities: two referral hospitals, 22 district and primary hospitals, one private hospital, and 77 clinics with maternity services *Population: 2,098,018* *HIV+ pregnant women (2013):13,902 (29%)*	X	

Activity 1. National Maternal Mortality Reduction Initiative

KEY ACCOMPLISHMENTS

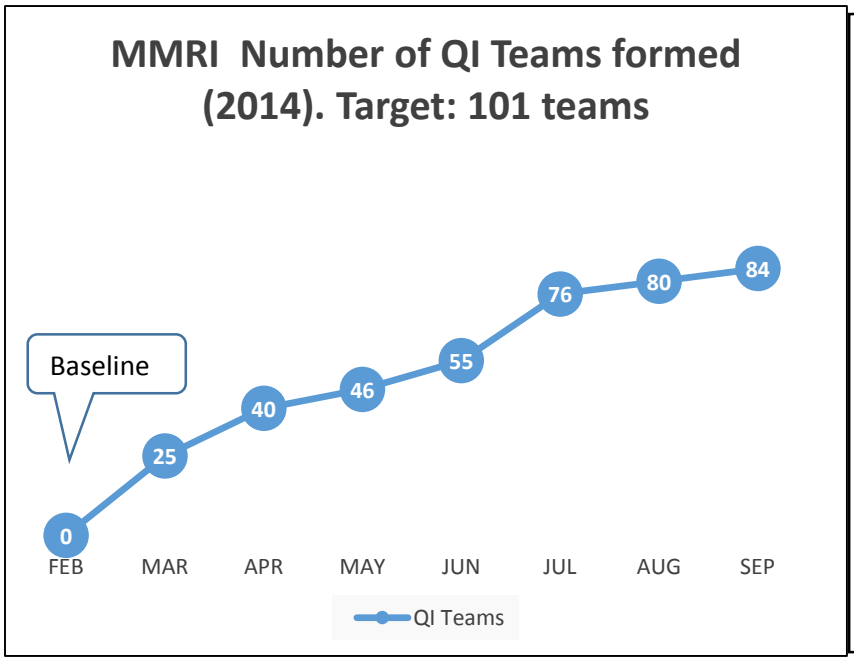
- **Supported the MOH in the development of an M&E framework for the MMRI.** ASSIST supported the Sexual and Reproductive Health (SRH) department in the development of a monitoring and evaluation (M&E) framework.
- **Developed of data collection tools.** ASSIST designed four paper-based data collection tools and one electronic data collection tool to support the collection and reporting of MMRI data: MMRI Antenatal Care (ANC) Data Collection Tool (Individual Patient); MMRI ANC Monthly Data Aggregation Tool; MMRI Maternal/Post Abortion Data Collection Tool (Individual Patient); MMRI Maternal/Post Abortion Monthly Data Aggregation Tool; and the e-MMRI District reporting tool. The computer-based tool captures and consolidates data at the district level with automatic calculation of indicators and time series charts at the facility and district levels. Each coordinator received a laptop loaded with the e-MMRI tool tailored to their specific area of coverage.
  - Draft tools were reviewed and pilot tested during the training session in January 2014 and later in district and primary hospitals.
- **Conducted training on data collection and reporting.** In early January 2014, coordinators were trained on the use of the tools for collecting data on the program indicators through computer-based tools. Coordinators were also taken through the process of using the consolidated database to report to the central MOH level.
  - The computer-based tool was designed to facilitate analysis and interpretation of data at the facility level, thus reducing the dependence of the MMRI midwife coordinators on the central government to provide timely and accurate analysis for feedback to the facility-based QI teams on performance.
  - Recording and reporting tools were first developed and pilot tested at a small scale in one reference hospital and feedback was included in improved versions of the tools for use in all facilities supported by the project. In addition, ASSIST developed a data collection manual to support the process of data collection in the facilities.
- **Conducted training on quality improvement.** Two training sessions on the methodology and practical application of quality improvement were held in early 2014 for the midwife coordinators appointed by the MOH to support the Maternal Mortality Reduction Initiative. As this was the first exposure to QI methodology for the coordinators, the content of the training was intentionally kept basic and practically oriented. The objective of the session was to provide the coordinators with sufficient knowledge on how to set clear aims, identify change ideas that could lead to improvement, and test these changes while measuring outcomes so that they felt confident in

applying QI principles in their assigned facilities.

- First QI training session - Gaborone, Jan. 13-14, 2014: Midwife coordinators were exposed to process mapping, driver diagrams, and fishbone tools used to help identify root causes of poor performance. Participants were then guided through the process of how to set clear aims, how to identify ideas that could lead to improvement, and how to test these ideas while measuring outcomes.
- Second QI training session - Gaborone, Feb. 10-12, 2014: Participants presented the improvement work they were currently engaged in. During the training, each coordinator developed a schedule to ensure they visited each health facility in their area of coverage every two weeks.

- **Provided support for the development and functioning of QI teams:** ASSIST provided support and coaching to the midwife coordinators and QI teams in the form of visits by the ASSIST MMRI Coordinator, ASSIST QI consultant, and from staff from the Sexual and Reproductive Health (SRH) Department of the MOH. Coaching visits focused on how to facilitate QI team meetings, setting objectives, and providing feedback. Direct support at the facility level was provided in Princess Marina and Scottish Livingstone (March 17-20, 2014), Princess Marina (April 2-4, 2014), Francistown and Selibe Phikwe (May 6-8, 2014), Selibe Phikwe (May 2014), Gumare (13-18 July, 2014), and Gaborone, Kweneng East, Kweneng West, Moshupa, Goodhope, Southern, and Lobatse Districts (8-12 September, 2014). The ASSIST team also worked with hospital directors to increase support for improvement teams in their facilities
  - As of mid-September, 2014, 84 QI teams were formed out of a total of 101 expected teams (Figure 1). Private hospitals have shown reluctance to engage in QI activities.

Figure 1: Botswana: Number of QI teams formed (Feb – Sept 2014)



QI teams were formed in the 2 referral hospitals, 6 district hospitals, 20 primary hospitals, and 56 clinics with maternity services.

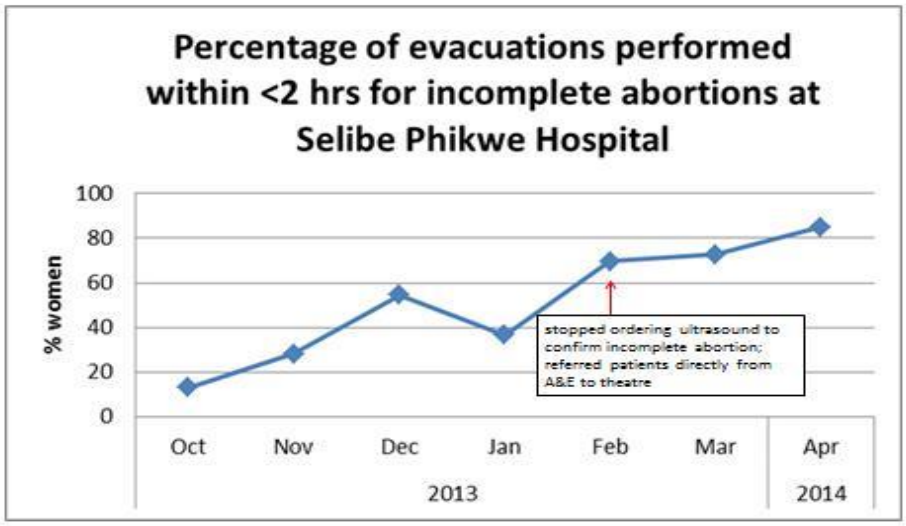
The percentage of QI teams working on the following topic areas are as follows: 36% on monitoring of 4th stage of labor, 15% on AMTSL, 20% on PE/E management, 12% on management of incomplete abortion, 4% on management of septic abortion, and 5% on PPH management.

- **Developed job aids for prevention and management of frequent obstetric complications.** ASSIST developed job aids covering prevention, early detection, and management of PPH, pre-eclampsia/eclampsia, and post abortion complications in a poster format which were subsequently shared with the country technical team and approved by the MOH. The MOH is currently in the process of publishing and distributing the job aid posters.
- **Built capacity at the central level for management and analysis of MMRI data.** ASSIST has been providing ongoing capacity building to MOH personnel for the consolidation, management, and analysis of data collected under the MMRI M&E system. In addition, the project developed a data consolidation system to aggregate monthly data from the districts into a master database as

well as a data analysis manual to support analysis at the central level.

- **Monitored availability of drugs essential to the provision of maternal/neonatal services.** MMRI coordinators reported that some facilities were experiencing stock-outs of essential drugs and that ongoing efforts to improve the quality of the services in an effort to reduce maternal morbidity and mortality would consequently be hindered by the non-availability of these drugs. To assess the magnitude of the stock-outs, the project developed a simple tool to assess the presence/absence of key drugs needed to prevent and treat obstetric complications in clinics and hospitals. Data were collected from facilities in 18 health districts during June, July and the first two weeks in August 2014. Drug availability is being reported by midwife coordinators and shared with the Central Medical Stores (CMS) weekly in an attempt to prompt a rapid response to dwindling drug levels in facilities.
- **Supported SRH division with data analysis.** The Safe Motherhood Initiative designed a maternal and Perinatal Monitoring Tool for monthly reporting of obstetric complications. Data were being captured at the SRH division but were not being analyzed. ASSIST supported in the 2nd quarter data management and analysis for 2012 data to strengthen the MOH health information system. Data from 2013 are not available yet at the MOH.
- **Conducted data collection for baseline assessment of the MMRI** (Feb 2014)**.** Baseline data were collected from 63 of the 101 facilities participating in the MMRI Initiative. The sample included the two referral hospitals, 22 district and primary hospitals, one private hospital, and 76 clinics with maternity services from 27 health districts. Data were reported to ASSIST headquarters for analysis.
- **Supported MOH training in Emergency Management of Obstetric Neonatal Care** (Q1)**.** ASSIST supported three Emergency Obstetric and Neonatal Care (EmONC) trainings conducted in the districts. One hundred and twenty midwifes and doctors participated in a two-week training designed to improve identification and management of obstetric and neonatal emergencies and to improve providers' clinical skills.
- **Conducted QI learning/sharing workshops.**
    - <u>First QI learning/sharing workshop, Gaborone May 12-15, 2014:</u> Conducted the first learning session for MMRI midwife coordinators and relevant stakeholders in the MOH, USAID, and the U.S. Center for Disease Control and Prevention (CDC). During the first two days, QI coordinators shared the progress of their improvement work since the QI training session in February 2014. Coordinators shared effective change ideas that could be replicated by other QI teams to improve the management of incomplete abortion. Figure 2 shows the data from the Selibe Phikwe hospital shared by the coordinator during the learning session and changes introduced. Participants received coaching on how to use the Model for Improvement to guide QI teams. During the workshop, coordinators reviewed baseline data, identified common reporting errors, and planned for validation and correction of reported data.

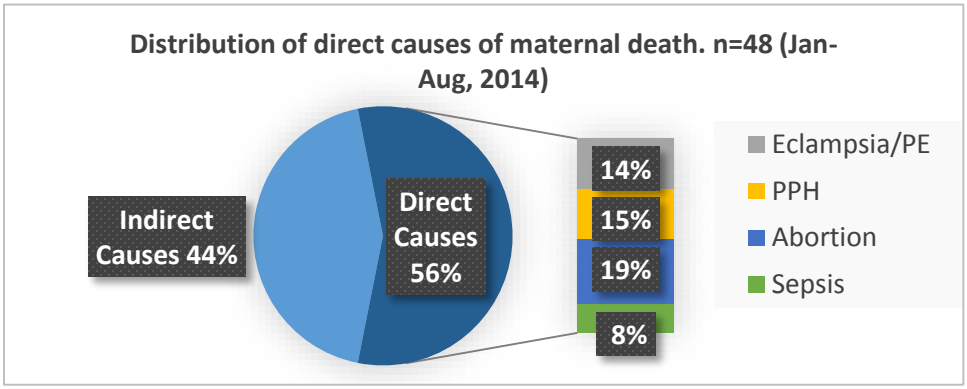
Figure 2: Botswana: Percentage of evacuations performed within <2 hours for incomplete abortions, Selibe Phikwe Hospital (Oct 2013 – April 2014)



- Second sharing/learning workshop, Francistown, September 22-26, 2014: Participants received coaching to further refresh their skills in applying the Model for Improvement and facilitating QI meetings. The workshop provided a forum for QI coordinators to share progress on their improvement work and discuss improvement strategies and barriers to implementation. Coordinators shared change ideas they had been using to secure improvements within the facilities they were working in and discussed how to use learned practices from one facility, or from another coordinator's experience, and adapt those for implementation in another facility. Coordinators identified common errors in data collection and discussed strategies, including validation and step-by-step actions, to improve the quality of data reported.
- Group exercises included an analysis of a case study from the national maternal death audits focusing on the identification of process issues and possible change ideas for improvement.

- **Participated in national maternal mortality audits** (Q4). Dr. Sinvula, ASSIST National MMRI Coordinator and national lead of the Maternal Mortality Audit Committee, conducted several maternal audits in the districts of Maun and Francistown as part of the ongoing committee activities to audit all maternal deaths that occurred this year. In addition, ASSIST conducted a preliminary analysis of maternal mortality audit reports through mid-August 2014**.** Forty-eight (48) maternal deaths were reported to the MOH in 2014 through mid-August, 2014. Of those, 35 were audited (73%). The remaining maternal deaths were not audited or were pending completion of an audit report. A preliminary analysis of the audits conducted provided the following insights: More than half of the deaths (56%) were attributable to direct obstetric causes. Of those, 19% were due to post abortion complications (sepsis, hemorrhage, etc.), 15% to postpartum hemorrhage, 14% to pre-eclampsia/eclampsia, and 8% to sepsis (Figure 3). Of those maternal deaths due to indirect causes (44%), the main factor was HIV-related complications (17%), followed by other medical conditions such as cardiomyopathy, endocrine disorder, respiratory disorder, etc. (13%).

Figure 3: Botswana: Distribution of causes of maternal death (Jan – Aug 2014)



- Maternal deaths due to PPH - Eight deaths were reported as being due to PPH; nevertheless, the maternal death audit revealed that all eight of the cases were related to hemorrhage that occurred during or post C-section interventions. These findings were reported to the MOH and further investigation is being conducted to clarify the situations that led to death during the interventions in different facilities. No case of PPH due to atonic uterus has been reported so far this year, which is consistent with the high compliance with AMTSL reported by most facilities.
- Most maternal deaths occurred in referral (42%), district (21%), or primary hospitals (29%). Only one death (2%) was reported in the patient's home and one in a private hospital (2%).
- Referral mechanisms were documented in 17 of the 35 maternal deaths audited. More than half (55%) of maternal deaths were referrals from other facilities. Two of the referred patients died in transit due to delays in the referral and failure to stabilize the patient before referral. Some maternal deaths were referred between 2-4 facilities, demonstrating a lack of coordination in referrals between facilities. There is no clear protocol for referral of obstetric emergencies.
- HIV status was reported in 23 of the 35 maternal audits conducted. Of those, 18 maternal deaths were HIV-positive and 5 HIV-negative. Seven of the 18 HIV-positive patients were reciving HAART, nine HIV-positive patients were not receiving HAART, and seven HIV-positive patients did not have treatment status documented.
- Data from 2012-2014 showed a seasonal pattern in maternal deaths, with a peak occurring during the months of November-January, most likely related to the national vacation time around Christmas (Figure 4).

Figure 4: Botswana: Seasonal pattern of the distribution of maternal mortality (Jan 2012 – Aug 2014)

RESULTS

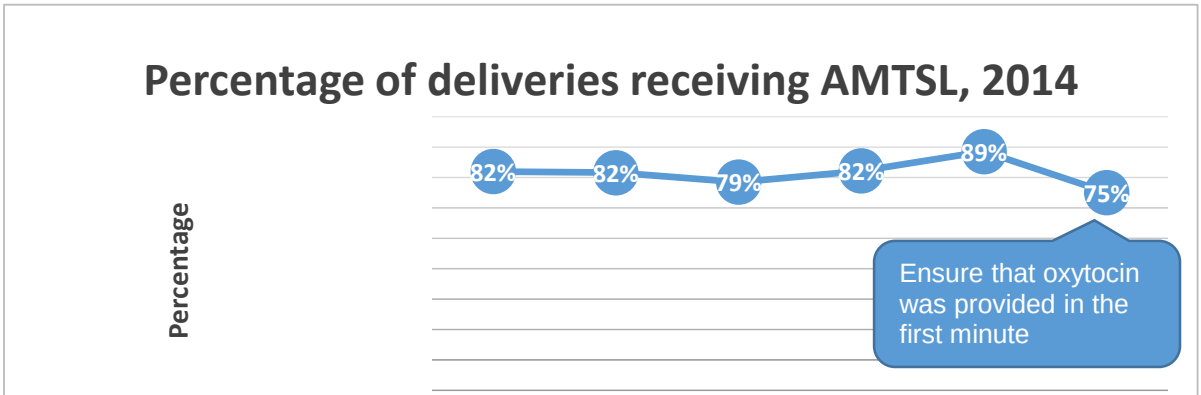
Improvement in Key Indicators

Activity	Indicators	Baseline February 2014	Last value July 2014
1. National Maternal Mortality Reduction Initiative	% administered oxytocin in the first minute after delivery (AMTSL)	82% (67 facilities reporting , 2031 deliveries)	75% (120 facilities reporting)
	% women monitored during the 4th stage labor per protocol	39% (67 facilities reporting , 2031 deliveries)	49% (120 facilities reporting)
	% women with severe PE/E managed per protocol (ANC)	6% (68 facilities reporting, 72 PE/E during ANC)	9% (121 facilities reporting, 55 PE/E during ANC)*
	% women with severe PE/E managed per protocol (labor)	22% (69 facilities reporting, 97 PE/E in labor)	29% (121 facilities reporting, 49 PE/E in labor)*
	% incomplete abortions managed per protocol	45% (26 facilities reporting, 257 incomplete abortions)	66% (29 facilities reporting,372 incomplete abortions)

*Since May 2014, 6 district hospitals are sampling data. The total values of outcomes during May-Sep only reflect the sample, not the total outcome in the facility. Data will be updated once received.

- **AMTSL:** As shown in Figure 5, the proportion of women who benefitted from active management of third stage of labor receiving a uterotonic within first minute of delivery of baby (oxytocin 10 units IM or misoprostol or ergometrine if oxytocin unavailable) has remained steady around 80% since February 2014. During the month of July, the QI teams of several facilities were working on improving compliance with AMTSL and thoroughly measuring the time to provide the oxytocic within the first minute of delivery. As a result, the indicator was adjusted downward as facilities began reporting compliance according to stricter adherence to the AMTSL protocol.

Figure 5: Botswana: Percentage of women that received oxytocin within the first minute after delivery (AMTSL) (Feb – July 2014)

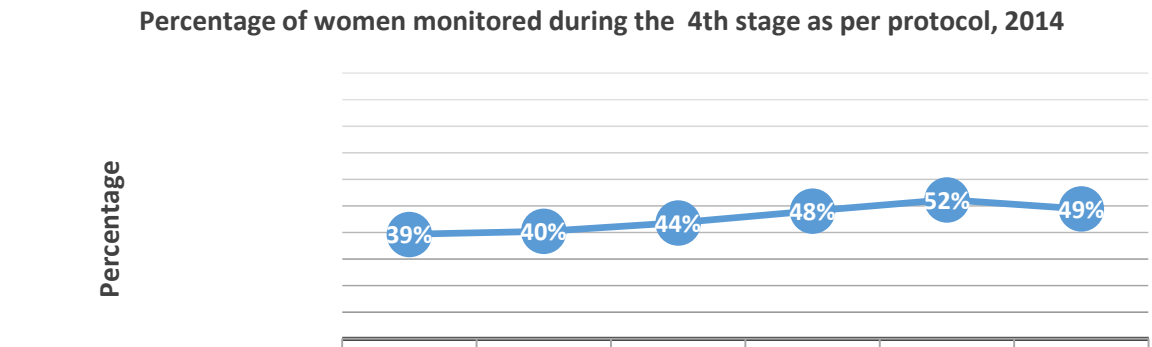


	Feb	Mar	Apr	May	June	July
% deliveries that receive AMSTL	82%	82%	79%	82%	89%	75%
Number deliveries	2384	3068	3191	2834	2601	2393
Number facilities reporting	67	90	91	101	98	120

- **Monitoring of the 4th stage labor.** The percentage of women monitored post-partum every 15 minutes for the first hour and every 30 minutes in the 2nd hour with documentation of vital signs,

vaginal bleeding, uterine consistency, urine output, height of fundus) is shown in Figure 6. This is a complex indicator to comply with, as it is time-consuming and requires health worker availability to perform measurement of vitals and physical assessments six times in the first two hours postpartum.

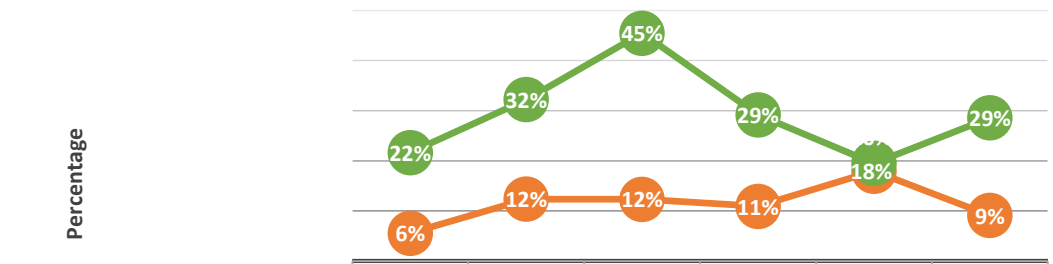
Figure 6: Botswana: Percentage of women monitored during the 4th stage every 15 min (1st h), every 30 minutes the second hour (Feb – July 2014)



	Feb	Mar	Apr	May	June	July
% 4th stage monitored	39%	40%	44%	48%	52%	49%
Number deliveries	2384	3068	3191	2834	2601	2393
Number facilities reporting	67	90	91	101	98	120

- **Proportion of pregnant women diagnosed with PE/E managed per protocol.** This indicator is measured at two levels: pre-eclampsia (PE) diagnosed during ANC visits should be provided with loading dose of MgSO4 and promptly referred to a higher level facility; PE diagnosed during labor should receive MgSO4 and be evaluated for immediate delivery if >34 weeks gestational age(GA) or provided with steroids for 24 h if <34 weeks GA followed by delivery. Figure 7 shows that compliance with this indicator is very low, mostly at the ANC level (11%). Improvement activities had been focused at the facility level during the first year and in FY15 will be scale up to include ANC services. Compliance with management of PE during labor increased to 45% in April, only to decrease afterwards. This increase, and the subsequent dip, needs to be further analyzed.

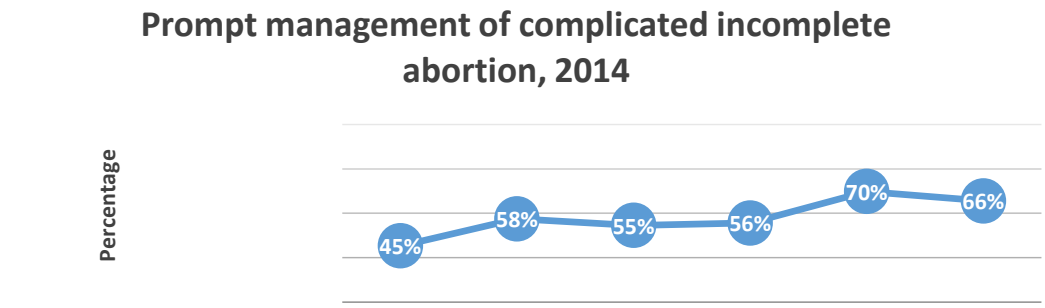
Figure 7: Botswana: Percentage of women with severe PE managed per protocol (Feb – July 2014)



	Feb	Mar	Apr	May	Jun	Jul
% ANC PE managed per protocol	6%	12%	12%	11%	18%	9%
ANC-Total pre-eclampsia	72	81	65	55	39	55
% Labour PE managed per protocol	22%	32%	45%	29%	20%	29%
Labour-Total pre-eclampsia	97	59	44	72	41	49
Number facilities reporting	69	90	91	101	98	121

- **Management of complicated incomplete abortion.** The project is focusing at this phase in the prompt evacuation of complicated incomplete abortions to reduce the risk of septic abortion. As of July 2014, compliance with prompt management of incomplete abortion has increased by 21 percentage points since the baseline assessment in February (Figure 8).

Figure 8: Botswana: Percentage of incomplete abortion evacuated within two hours of diagnosis (Feb – July 2014)

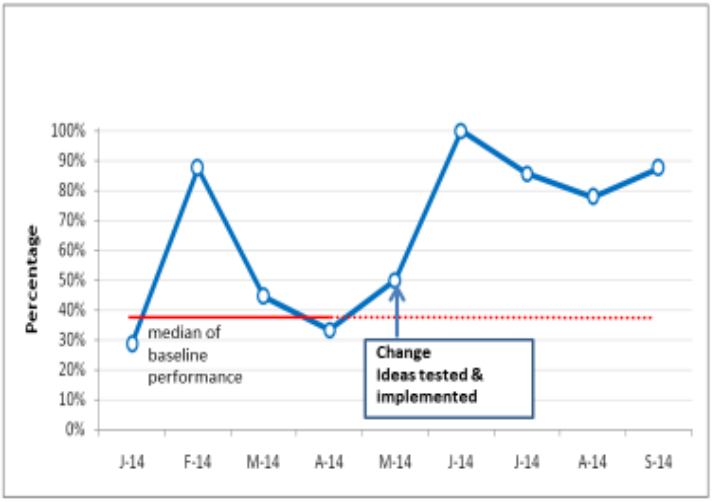


	Feb	Mar	Apr	May	June	July
% incomplete abortions managed per protocol	45%	58%	55%	56%	70%	66%
Number abortions that received emergecy care	349	466	452	511	535	590
Number facilities reporting	26	39	39	37	37	29

- **QI Team Performance.** QI teams are showing better understanding of QI methodology, how to identify and test change ideas, and determine if they led to an improvement. Some examples of facility-level improvement across several topic areas and districts include:

Example 1. Improvement in management of severe PE in Princess Marina Hospital, Botswana's largest referral hospital (Figure 9).

Figure 9: Botswana: Percentage of women diagnosed with severe pre-eclampsia during labor who were managed with MgSO4 at Princess Marina Hospital, Gaborone (Jan – Sept 2014)



Context: 9 out of 24 maternal deaths at Princess Marina Hospital in 2013 were due to severe pre-eclampsia.

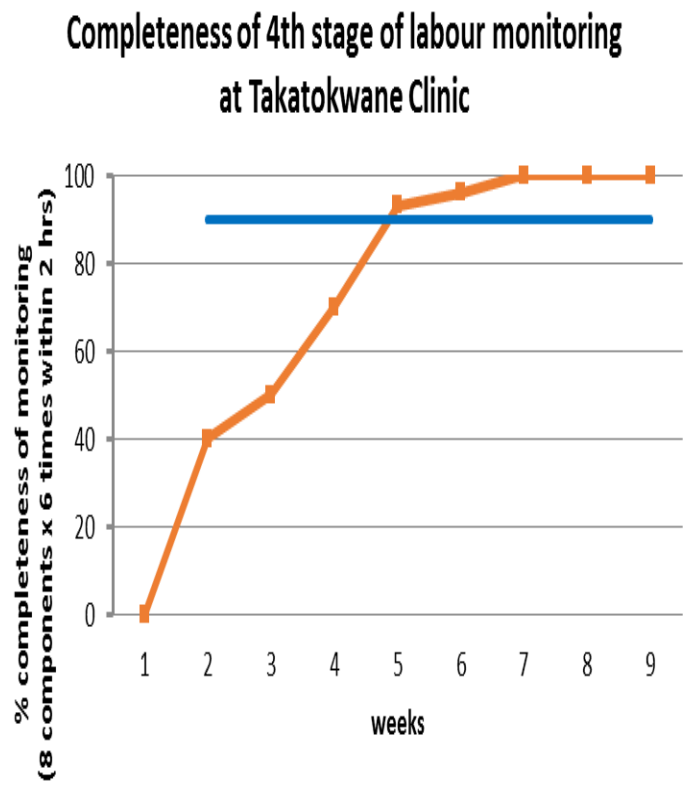
Problem identification: The QI team audited all PE patient files from Dec 2013 to Feb 2014 to determine processes that contributed to the poor management of patients with severe PE. These included:

- Delays in initiation of patients on MgSO4.
- Patients were not reviewed by specialists
- Delayed delivery plan

Change idea - All patients with severe PE seen by specialist within 1 hour of admission and

Example 2. Improving compliance with monitoring of the 4th stage of labor at Takatokwane maternity clinic (Figure 10)

Figure 10: Botswana: Percentage completeness of monitoring, Takatokwane Clinic (June-Aug 2014)



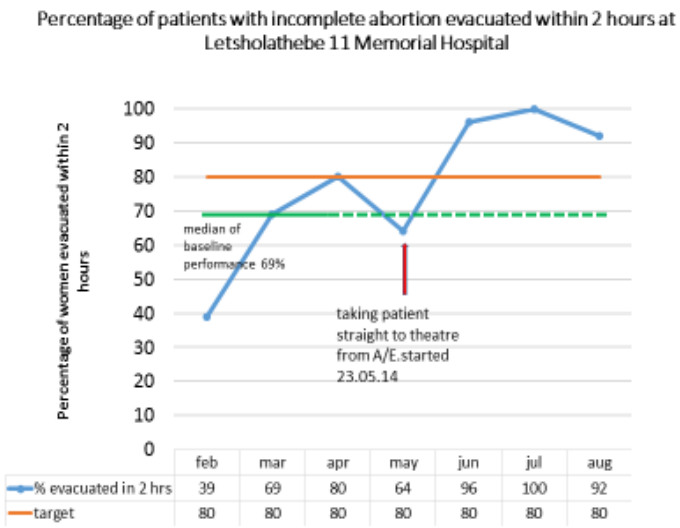
Context: Midwives in Takatokwane Clinic were not monitoring for the 4th stage of labor, resulting in patient neglect and late identification of complications such as post-partum hemorrhage.

By looking at the obstetric records, staff were made aware of the gaps in monitoring the 4th stage of labor. Staff were reminded of the importance of monitoring the 4th stage.

Change ideas included calling the second midwife if the one on staff is too busy to monitor the 4th stage; supervisor providing increased support; and auditing patient cards when giving report to the other midwives. As a team it was agreed that they would initially start monitoring the 4th stage four times. After they adapted to this, they would increase to five times, and finally to six times.

Example 3. Improving management of incomplete abortion in Letsholathebe hospital (Figure 11).

Figure 11: Botswana: Percentage of patients with incomplete abortion evacuated within 2 hours, Letsholathebe 11 Memorial Hospital (Feb – Aug 2014)

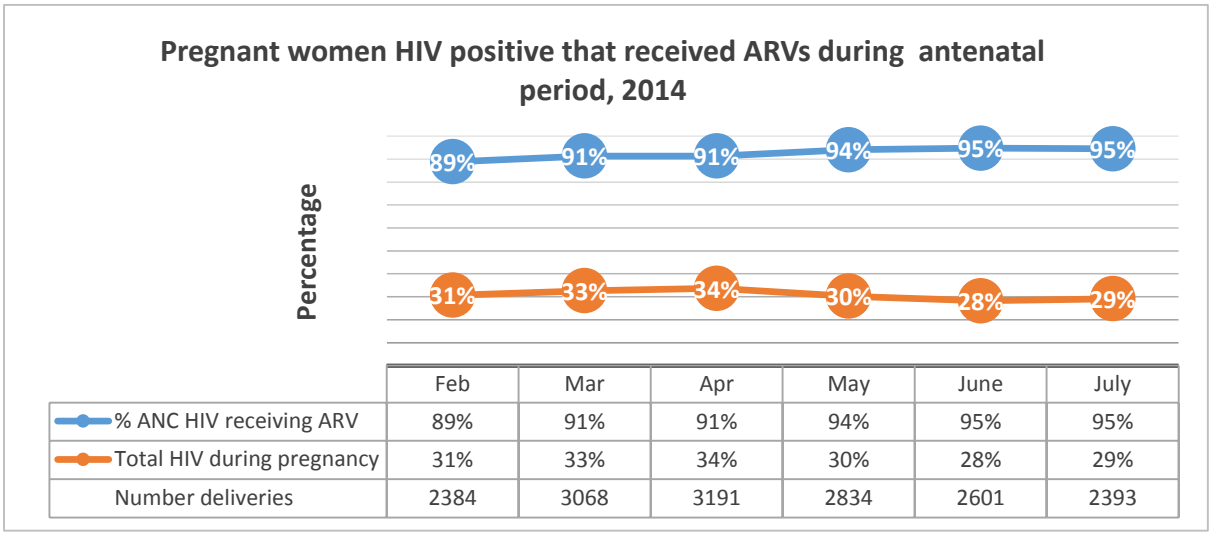


Context. The facility had had a maternal death of a 17 year-old girl with an incomplete abortion whose uterine evacuation had been delayed. She eventually became septic and died. Data confirmed delayed evacuations and resultant sepsis were not uncommon.

The **change idea** was to have patients with incomplete abortions sent directly to theatre from A&E instead of first being admitted to the inpatient ward. This reduced the patient waiting time and resulted in quicker evacuations of patients with incomplete abortions.

- **HIV prevalence among pregnant women.** As seen in the Maternal Mortality Report (2007-2011), maternal mortality is three times more frequent in pregnant women who are HIV-positive compared to those who are negative. As such, a reduction in maternal mortality will be directly dependent on improving appropriate management of HIV. The HIV prevalence rate in Botswana among adults aged 15 to 49 is 21.9% (2013)[1], but we are finding a higher prevalence rate (30%) among pregnant women. On average, 92% of HIV-positive pregnant women were receiving ARVs during the ANC period (Figure 12).

Figure 12: Botswana: Percentage of pregnant women HIV positive that were receiving ARVs (Feb – July 2014)

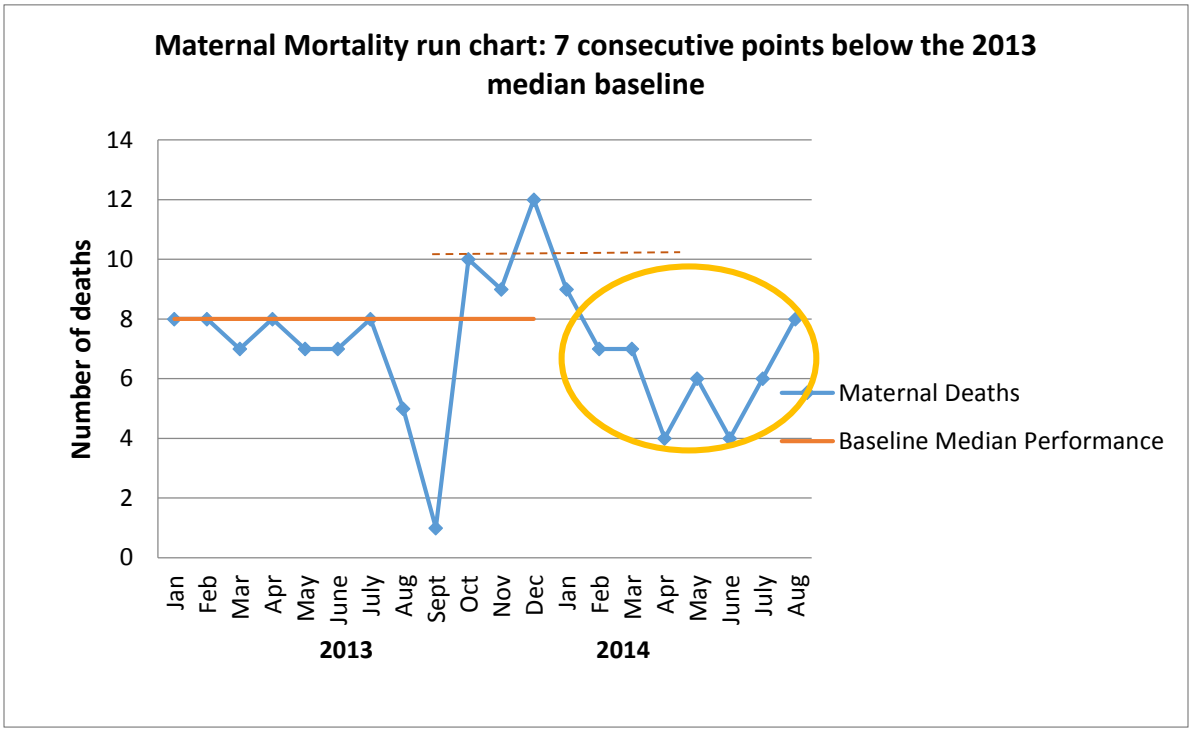


- **Preliminary Analysis of Maternal Mortality in Botswana in 2014.** A preliminary time series analysis of the number of maternal death since January 2013 showed a shift in the number of

[1] HIV and AIDS estimates 2013. UNAIDS. http://www.unaids.org/en/Regionscountries/Countries/Botswana/

maternal deaths in 2014, with seven consecutive points measured below the median baseline for 2013 (Figure 13). We need to interpret this graph positively but also with caution as we have learned that there is a seasonal peak in mortality around the end of the year that could affect these encouraging findings.

Figure 13: Botswana: Number of maternal deaths (with 7 consecutive points below median) (Jan 2013 – Aug 2014)



SUSTAINING AND INSTITUTIONALIZING IMPROVEMENT

By design, the MOH of Botswana has complete ownership of the MMRI. All operational costs are being covered by the MOH. ASSIST is solely providing technical assistance and the salary for the National Coordinator, who is based within the MOH.

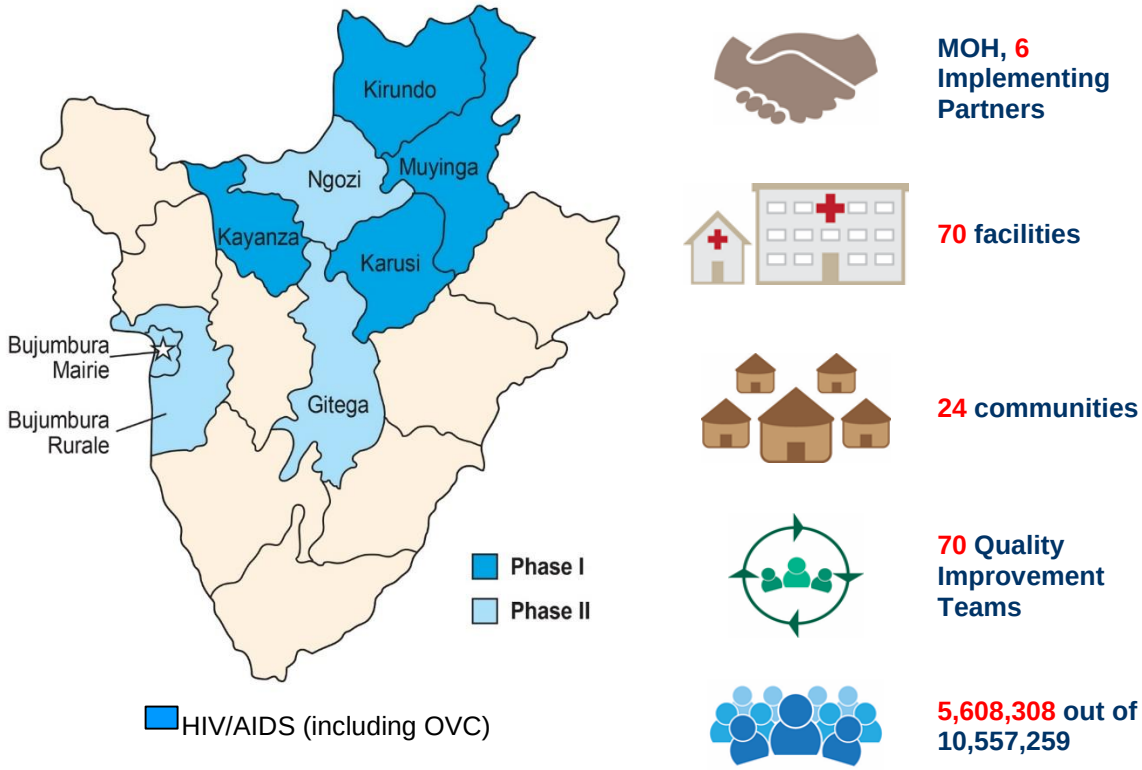
A long-term objective of the collaboration between the USAID ASSIST Project and the MOH is to provide high level and operative level capacity building in quality improvement methods applied to the health sector and to effectively create an environment suitable for implementation of quality improvement approaches at scale in the health system in Botswana in a way that will achieve sustainability and will maintain health improvements over time.

BURUNDI

BACKGROUND

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 HCI. The project is working with the Ministry of Health to improve the uptake and quality of PMTCT services for mothers, their partners, and their infants and improve retention of mothers and infants along the PMTCT cascade.

Scale of USAID ASSIST's Work in Burundi



PROGRAM OVERVIEW

Activities	What are we trying to accomplish?	At what scale?	Improvement Activity	Activity
1. Implementing a PMTCT improvement intervention in 8 provinces of Burundi	• 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 • Strengthen the Community System to improve the performance of community health workers (CHWs) to provide quality PMTCT services at the community level	8 of 17 provinces 12 of 12 health districts in the 4 initial provinces Facilities: 70 of 150 PMTCT sites in the 12 initial districts Communities: 24 sub-collines surrounding 6 of 15 facilities; and peripheral facilities in Giteranyi district QI teams: 70 facility teams; 24 community teams Coverage: 5,608,308/10,557,259 inhabitants	X	

Activity 1. Implementing a PMTCT improvement intervention in 8 provinces of Burundi

KEY ACCOMPLISHMENTS

- **Conducted site coaching visits in four provinces: Kayanza, Kirundo, Muyinga, and Karusi.** During FY14, coaches conducted coaching visits in all 70 PMTCT sites. Visits were conducted by

district coaches and PNLS (National Program for the Fight against AIDS/STI) or ASSIST technical staff and were carried out in 30 sites (Q1), 21 sites (Q2), 28 sites (Q3), and 8 sites (Q4) to assess and support the functionality of QI teams. The coaching visits throughout the year were focused on collecting change ideas tested that resulted in favorable improvements. The change ideas will ultimately be collated into a package of best practices to be shared with sites in all 8 provinces. The objective of this work is to develop the competencies of the coaches in improvement and coaching skills to help sites address other areas identified as gaps in the baseline assessment (i.e., retention, clinical care).

- **Organized a refresher training for district coaches in the four initial provinces** (Nov 27-29, 2013)**.** With the technical assistance of Sabou Djibrina, Quality Improvement Advisor from the Regional Office in Niger, ASSIST Burundi and the MOH organized a three-day workshop for the district coaches to strengthen their capacities to address improvement gaps identified during coaching visits.
- **Organized refresher training on QI process for provincial and district management teams and hospital management in the four initial provinces.** During March 2014, in collaboration with PNLS, ASSIST organized a refresher training on the QI process for provincial and district management teams and hospital directors in the four initial provinces in which ASSIST was working; the 24 participants included MOH and PEPFAR/USAID Mission representatives. This training was organized in order to reinforce the capacity of medical doctors, chiefs of the District Health Office and the Provincial Office of Health as well as hospital directors on the collaborative approach for improvement of PMTCT activities. It was also an opportunity to discuss their roles and responsibilities in the coordination of improvement activities at each level (DHMT, PHMT and hospital) with the objectives of encouraging them to integrate those activities in their respective activity plans at each level.
- **Conducted the fourth and fifth learning sessions for 70 QI teams from the four initial provinces** (Q1-2)**.** ASSIST Burundi conducted the fourth learning session for 70 QI teams from Kayanza, Kirundo, Muyinga and Karusi. Sabou Djibrina provided support and technical assistance. A total of 160 participants attended the session, including site QI team representatives, coaches and members of District and Provincial Health Management Teams. The main objective was to strengthen the capacity of key stakeholders in the process of implementing the PMTCT improvement collaborative and sharing experiences through presentations by sites and feedback related to the previous coaching visits. During this learning session, change ideas were collected and focus was given to identify the practices which produced the best results. At the time of this learning session, the participants chose the best sites per district and province referring to predefined criteria. Changes ideas were collected in order to help identify the tests that really produced improved results.
  The fifth learning session was conducted in August 2014 in collaboration with the MOH. Each of the 70 QI teams was represented by two members. Provincial health managers, district health managers, and one coach per health district also participated in the session. The main objective was to share change ideas tested by each site, to analyze improvements obtained as well as to validate data that showed evidence of improvement. The session allowed the opportunity to discuss recommended next steps for teams, including the development of the final package of best practices and strategies which will be used to inform the extension phase into sites in the four expansion provinces.
- **Expanded the collaborative approach into the new PEPFAR provinces (Gitega, Ngozi, Bujumbura and urban Bujumbura).** During March 2014, ASSIST staff conducted briefing visits to the provincial and district management chiefs in the four new provinces. During these visits, the following was achieved: presentation of ASSIST as a new partner in the province, introduction of the ASSIST Project and its technical content within the HIV/AIDS Program in Burundi, the QI collaborative approach, and proposed next steps.
- **Conducted the first learning session for community committees in Giteranyi District.** In April 2014, in collaboration with the MOH, ASSIST conducted the first learning session for the 24 community committees located in the Giteranyi health district where ASSIST is implementing community health systems activities. A total of 68 participants attended the session, including 30 community committee representatives as QI team members, four *Technicien de Promotion de la*

Santé (TPS) (who serve as community coaches), 15 community health workers, three chiefs of collines, eight participants from the health center covered by the collaborative approach, six MOH representatives, and two commune and provincial representatives. The main objective of the session was to strengthen the capacity of community committee members and other key stakeholders in the process of strengthening the community health system and increase their understanding of the roles that existing community groupscan play in improving health outcomes. Participants were trained on quality improvement principles and community improvement models; how to build a community quality improvement team and its functionality; information flow; data gathering; and experience sharing through the presentation of drawings that illustrate the network of groups that make up each community health system. During this learning session, the participants selected indicators which will be collected monthly and help in measuring improvement.

- **Provided technical assistance to community committees in the pilot health district of Giteranyi.** During the second half of FY14, the community coaches continued coaching visits to the community committees corresponding to sub-collines. Coaching visits were conducted to eight community committees by teams of community coaches (TPS) and PNLS or ASSIST technical staff. The coaching visits focused on the data collection tool and how to identify and test changes.
- **Developed documents for the extension into the new sites in the 8 provinces.** In June 2014, ASSIST Burundi with the technical assistance from Justin Mandala, FHI360 Technical Advisor for HIV/AIDS, began developing basic documentation for the extension into the new sites in the eight provinces. The package of documents included: 1) the final change package from Phase I; 2) development of dissemination strategies; and 3) definition of the provisional package of changes for Phase II. The development of these documents continued through the end of the fiscal year. The documents are expected to be finalized and validated during the first quarter of FY15.
- **Research study conducted, "Factors associated with HIV testing among male partners of women in antenatal care study."** In February 2014, data collectors for the study were trained, and a pre-test study data collection tool was conducted. The objective of this research study is to determine the barriers and inhibitors to engaging male partners in ANC. Data collection was completed; analysis will continue into FY15..
- **Engaged with MOH and partners throughout the year.** During FY14, ASSIST Burundi participated in meetings, workshops and key events organized by the MOH and partners in order to strengthen collaboration and improvement efforts. These activities included the following:
    - Participated in meetings of the National AIDS Control Council, PNLS, the PEPFAR/USAID team, and its implementing partners which focused on the coordination of HIV activities in Burundi (January and April 2014).
    - Participated in a dissemination workshop of the new WHO PMTCT guidelines and a validation workshop of the roadmap on decentralization of ARV treatment organized by the PNLS (March 2014).
    - Attended a coordination meeting of the health partners organized by Kayanza's health province (March 2014).
    - Participated in the training on supervision of HIV/AIDS activities organized by PNLS (May 12-14, 2014).
    - Contributed to the elaboration of the new HIV/AIDS National Strategic Plan 2014-2017 (July 2014).
    - ASSIST Burundi received delegates from the Ministry of Home Affairs and the Ministry of External Affairs who wanted to see how the project operates and the nature of its assistance in the health sector (July 21-22, 2014).
    - Participated in the training on the Site Improvement Monitoring System (SIMS) organized by the USAID/PEPFAR country mission (September 14-19, 2014).

RESULTS

Improvement in Key Indicators

Activity	Indicators	Baseline July 2012	Last value August 2014
Implementing a PMTCT improvement intervention in 8 provinces of Burundi	Proportion of pregnant women tested during ANC visits (69 sites)	47%	99.8%
Implementing a PMTCT improvement intervention in 8 provinces of Burundi	Proportion of partners tested (husbands or partners of enrolled women in PMTCT services) (69 sites)	0%	51%
Implementing a PMTCT improvement intervention in 8 provinces of Burundi	Number of exposed children tested at 18 months (69 sites)	9	20

- Improvements were observed in the proportion of women from ANC whose partners are tested for HIV (Figure 14) and in decreasing the gap between the number of pregnant women enrolled in the first ANC visit and those who were tested for HIV (Figure 15).
- Historically, sites were not tracking the number of children exposed to HIV. Therefore, sites did not know how many children required follow-up testing. QI teams tested changes and created a mechanism for tracking and follow-up exposed children, and improvements were observed (Figure 16).
- Improvements were observed in the documentation of PMTCT services before delivery (Figure 17).

Figure 14: Burundi: Percentage of women from ANC whose partners are tested for HIV, 69 sites, 12 districts, 4 provinces (July 2012 – Aug 2014)

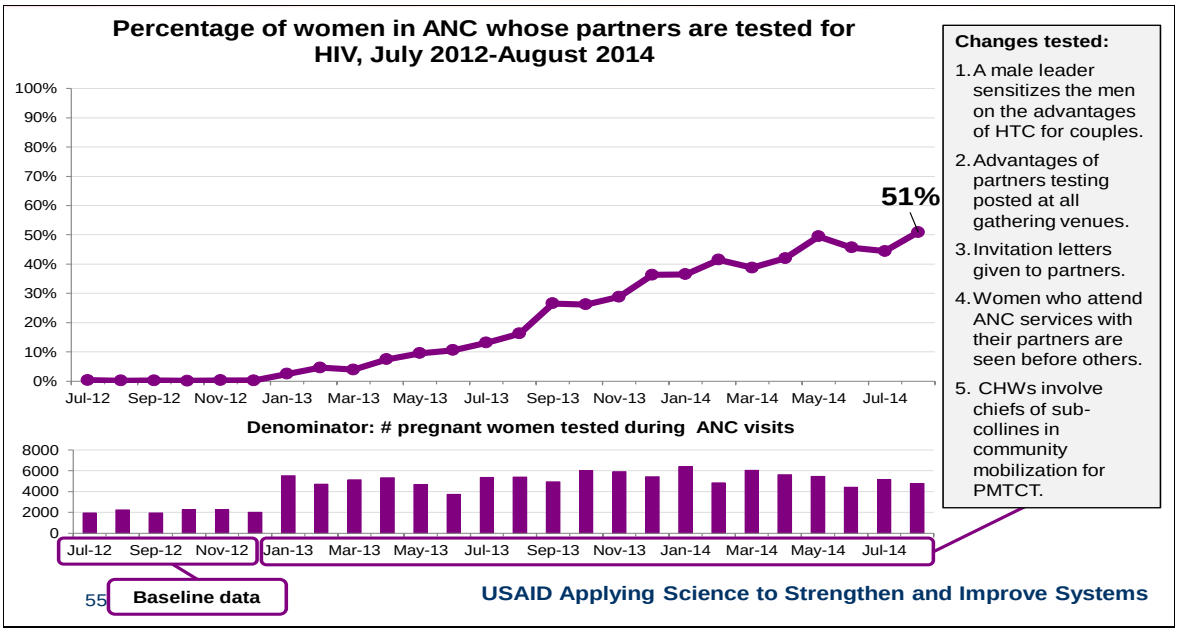


Figure 15: Burundi: Closing the gap between the numbers of pregnant women enrolled in the first ANC visit and those who have been tested for HIV, 69 sites (July 2012 – Aug 2014)

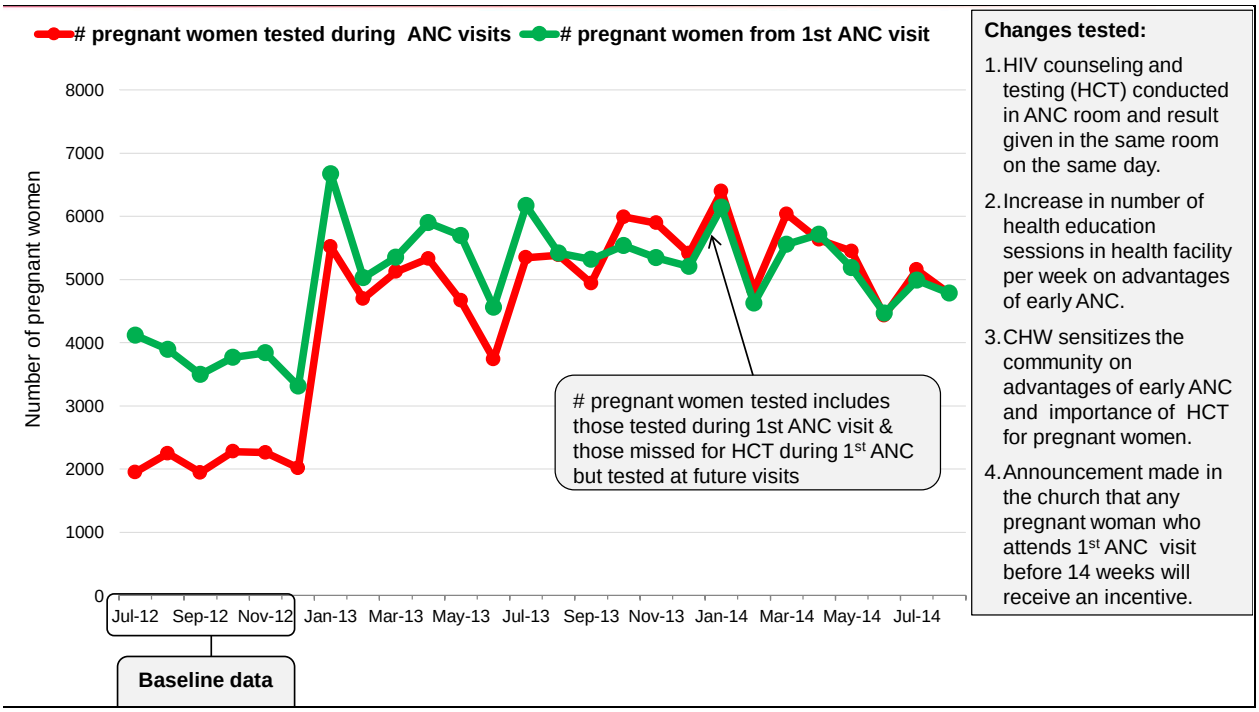


Figure 16: Burundi: Number of exposed children who are tested serologically at 18 months, 70 sites (July 2012- May 2014)

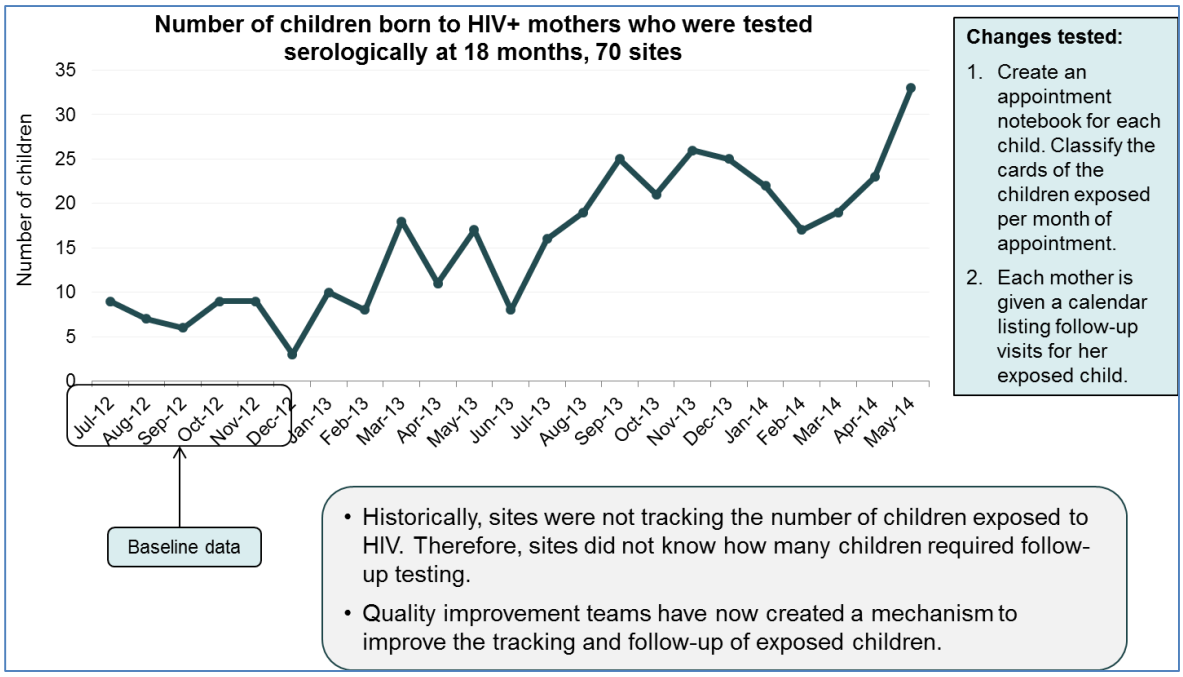
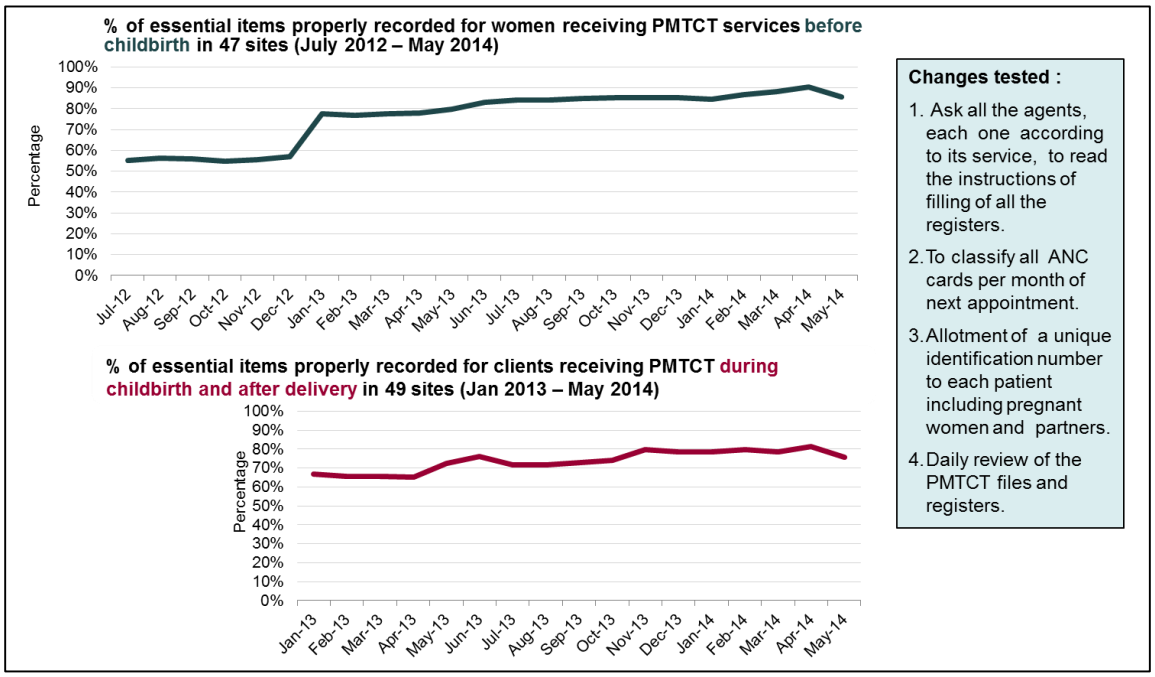


Figure 17: Burundi: Percentage of essential items properly recorded in PMTCT tools before childbirth, 47 sites (July 2012 – May 2014)



SUSTAINABILITY AND INSTITUTIONALIZATION

USAID ASSIST works closely with all levels of the health system in Burundi to ensure the sustainability of achievements of the collaborative improvement approach. ASSIST's strategy of joint supervision and coaching visits with the National AIDS program (PNLS) prepares for the ownership of the approach by the MOH counterparts.

Coaching visits were held jointly with coaches selected from district and provincial health management teams (DHMTs and PHMTs). QI teams were encouraged to incorporate discussions about the PMTCT improvement work in other meetings outside of QI team meetings in their sites (e.g., health facility committee meetings or Health District coordination meetings).

In order to institutionalize improvement approaches, refresher trainings on the QI process were conducted to improve capacity of PHMTs, DHMTs, and hospital management in the four inital provinces. It was also an opportunity to discuss their roles and responsibilities in the coordination of improvement activities at each level, to encourage them to integrate those activities in their respective activity plans at each level.

COTE D'IVOIRE

BACKGROUND

Since April 2013, the USAID ASSIST Project is supporting the Ministry of Health and the National HIV Program in Cote d'Ivoire to:

1. Improve the quality of antiretroviral therapyand PMTCT services;
2. Support the WHO/CDC laboratory accreditation program; and
3. Support the development of a policy document to address national health information standards for each level of the health system.

This work builds on the quality improvement interventions implemented under the USAID Health Care Improvement Project (HCI) in the country since 2008. We are working in Cote d'Ivoire with the following implementing partners (IPs): ACONDA-VS, ICAP, EGPAF, Ariel Glaser Foundation, HAI, SEV-CI.

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

MOH, SPAQS, DIPE, PNPEC, 6 Implementing Partners

60 facilities

60 Quality Improvement Teams

6 million out of 23 million

HIV/AIDS (including OVC)

PROGRAM OVERVIEW

Activities	What are we trying to accomplish?	At what scale?	Improvement Activity	Activity
1. Improve the quality of HIV and AIDS care and treatment services	• Strengthen leadership, management and planning of MOH quality improvement unit in coordinating quality improvement activity design and implementation • Establish quality improvement system in university hospitals • Improve retention in care HIV+ patients on ART • Improve the percentage of pregnant women who receive prophylaxis for PMTCT • Build capacity of IPs to establish improvement activities within their supported health facilities	Central Level 4 University Hospitals (District Abidjan South, East and North; and Bouake) 23 out of 30 regions 60 sites selected and distributed among these regions and districts Expected population coverage: 6 million/ 23 million inhabitants Quality improvement teams: 60	x	
2. Support the WHO/CDC Stepwise Laboratory Improvement Process Towards Accreditation (SLIPTA)	• Enable national structures involved in the process to coordinate and monitor WHO-AFRO Stepwise SLIPTA • Strengthen capacity of laboratory staff to improve their skills for efficient interventions • Ensure follow-up and periodic evaluation of the progress of laboratories involved	15 of 21 labs from 1st cohort. 10 of 21 labs from 2nd cohort 10 districts and 10 health regions		x

Activities	What are we trying to accomplish?	At what scale?	Improvement Activity	Activity
3. Improve the strategic information system	• Support development of procedures for data use and promotion of information use culture • Support new quality improvement initiative with accurate data used for decision making at all levels	National scale		x

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

KEY ACCOMPLISHMENTS

The number of health facilities in Cote d'Ivoire providing HIV care and treatment services, including antiretroviral therapy (ART), increased from 8 in 1998 to 538 facilities in 2012. Facilities of all levels of the health pyramid are engaged in HIV service delivery including ART services. ASSIST is providing technical assistance to PEPFAR implementing partners to improve their capacity to support the MOH in delivering high quality HIV care and treatment services, by building partners' capacity to develop a culture of quality improvement in their supported health facilities and implement improvement activities on their own in the long run.

- **Provided technical assistance to PEPFAR implementing partners on new QI initiative.**
  - A series of meetings with USAID/CDC and PEPAR IPs were conducted to organize the preparation phase of an improvement collaborative. ASSIST was asked to provide technical assistance to all IPs to implement the collaborative in 60 pilot health facilities (10 health facilities per partner).
  - In Q1, the competencies of 53 technical staff of PEPFAR IPs and PEPFAR and MOH staff were reinforced on collaborative improvement methods.
  - From February-March 2014, ASSIST conducted the first series of trainings on QI methods and knowledge management. Seven classroom sessions were organized and facilitated by teams composed of staff from ASSIST and PEPFAR clinical partners.
  - To build the capacity of IPs on the use of QI performance evaluation tools, ASSIST organized two trainings in order to allow IPs to have a good understanding of the tools and the evaluation process. A "theoretical" training was held on March 18, 2014 with 24 participants from the six PEPFAR clinical partners on the indicators, the sampling, and the ART and PMTCT tools. A "practical" training was held from March 19-20, 2014 in six ART/PMTCT health facilities. Six teams were formed and every person in a team participated in the evaluation of one of the six ART/PMTCT sites selected. All participants pilot-tested sampling, asking questions, reviewing patient medical records, and completing the tools. After the trainings, the baseline evaluation by IPs was planned.
- **Conducted a policy seminar on infrastructure and policy for improving health care in Cote d'Ivoire.**

  A one-day seminar entitled, "Thoughtful Conversation on National Improvement Strategies and Infrastructure for Improving Health Care" was convened on February 26, 2014. The meeting had 57 participants, including the Director General of the MOH and senior MOH officials. The meeting raised the question of how the government of Cote d'Ivoire can best pursue improvement. One conclusion of the meeting was that the current infrastructure is non-functional and according to the MOH, another institution will be handling improvement.
- **Promoted the use of collaborative improvement in the implementing partners' quality approach.**
  - Coaching visits: Conducted coaching visits in 50 out of 60 sites supported by PEPFAR implementing partners from April – May 2014. The aim of the visits was to check the

functionality of the quality improvement teams, their recognition by the site leadership or management teams, and review of developed process diagrams. As a result, all visited sites had a functional quality improvement team and developed process diagrams. In September 2014, ASSIST conducted the second coaching visit for the health facilities supported by two PEPFAR partners (EGPAF and ICAP) where 20 health facilities were visited. During the coaching visit, performance data was reviewed, and coaching was conducted on the development of site level improvement plans.

  - Learning sessions: Conducted the second learning session closely with ICAP in Abidjan for its 10 supported sites (June 23-26, 2014) and for ACONDA, SEVCI, HAI and EGPAF in the fourth quarter. Health professionals (clinicians, nurses, midwives) from 40 out of the 60 facilities participated.
  - Although the other IPs have already had their second learning sessions, the Ariel Glaser Foundation is delayed in the process. In May 2014, two sessions (Abidjan and San Pedro) were organized to teach 27 of Ariel Glaser's staff on the management of baseline assessment tools and the assessment process. In September 2014, ASSIST conducted the first coaching visit of the Foundation's 9 sites in Abidjan and San Pedro. These sessions were facilitated by teams composed of ASSIST and the Foundation's staff.
  - The focus of the last quarter was to finalize the preparation phase of the collaborative with the implementing partners. Due to each partner's different levels of engagement, achievement of this process differed widely. Although the schedule of deliverables was defined by consensus during quarterly coordination meetings, not all IPs complied with approved schedules.

- **Provided technical assistance in PEPFAR partners' improvement plan development.** In Q4, ASSIST organized a workshop on the development of improvement plans. By the end of the fiscal year, four IPs had finalized their improvement plans (HAI, SEVCI, ICAP and ACONDA) and the two others are in the process of finalization (EGPAF and ARIEL). Only 15/60 health facilities have developed their improvement plans.
- **Provided assistance in HIV care standards development.**
  - During August-September 2014, ASSIST worked with the MOH's Directorate for HIV Services, on the development of National HIV Care and Treatment Standards. ASSIST organized three workshops and developed two documents for the first level of the health system: HIV care standards for community services and HIV care standards for health services.
  - In collaboration with ASSIST, the unit in charge of HIV care and treatment services of the MOH convened a workshop to validate the National HIV care and treatments standards. This meeting convened PEPFAR and its partners, MOH, and the different governmental units/department for HIV/AIDS on Aug 18-20, 2014.
- **Progressed in establishing a QI system in the four university hospitals in the country.**
  - Engaged the MOH entities in charge of quality of health care in Cote d'Ivoire (National Quality Assurance for Health Services Department [*Service Promotion Assurance Qualité des Soins*] or SPAQS and CRESAC) as well as the quality committee established by the MOH to identify the best strategies to boost quality improvement activities. ASSIST participated in a one-day workshop in the third quarter with the heads of the four university hospitals on the theme of responsibility of health care managers for quality improvement. This activity was the first of its kind around QI with these participants and will thus facilitate ASSIST's support for improvement activities in the university hospitals.
  - SPAQS and CRESAC conducted five meetings in the fourth quarter to finalize the development of the guidelines on Reception and Hygiene of patients including HIV patients. The QI leads of the four university hospitals were present and actively participated in the discussions. The establishment of the QI system is expected to be built by the SPAQS in collaboration with the QI focal points in these hospitals, with the technical assistance of ASSIST.
- **Improved the coordination of the Ministry of Health's quality unit activities**

- A three-day workshop (September 2014) on *Management by Results* was organized by ASSIST to bring together the Ministry's quality unit and QI focal persons from the four university hospitals to build their capacity.

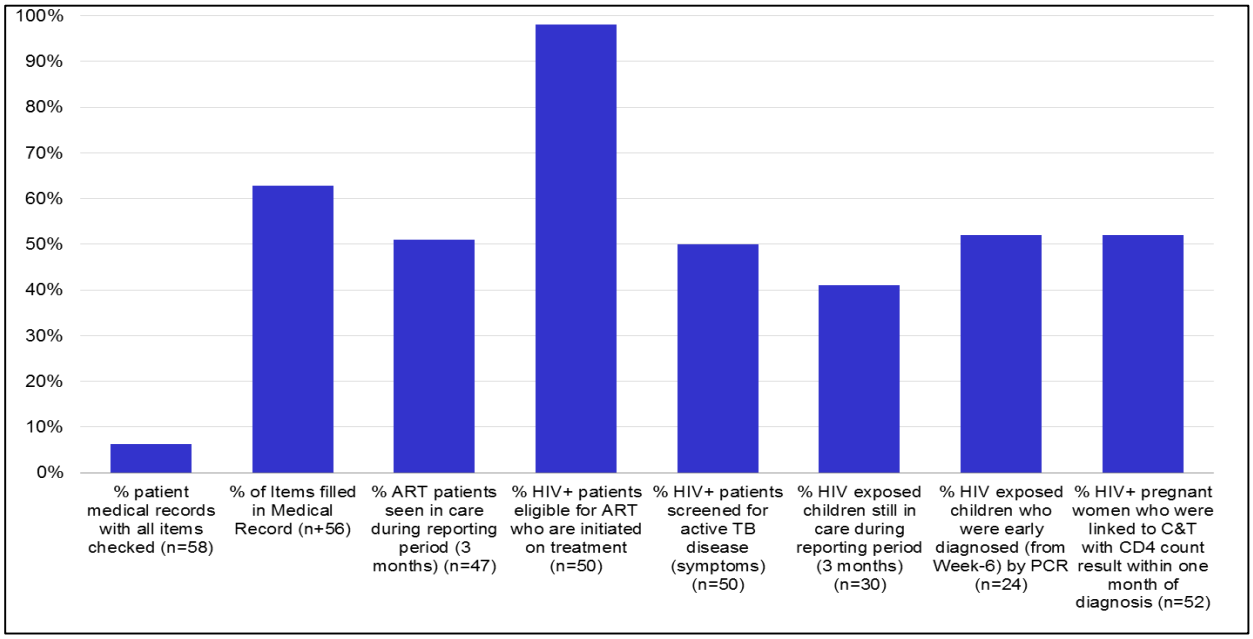
RESULTS

Improvement in Key Indicators

Activity	Indicators	Baseline (Jan-March, 2014)	Last value
Improve Quality HIV/AIDS care and treatment services in Cote d'Ivoire	% of client records with all items filled	6% (58 sites)	Data are still being collected/ validated
	% of HIV positive patients eligible to ART and initiated on ART	98% (50 sites)	
	% of HIV positive patients who are screened for tuberculosis during clinic visit	50% (50 sites)	
	% of HIV positive patients on ART seen in the review period	51% (47 sites)	
	% of infants born to HIV positive mothers tested by PCR prior two months and with PCR result	53% (24 sites)	
	% of HIV positive pregnant women with baseline CD4 test performed in the first month of diagnosis	50% (52 sites)	
	% of infants born to HIV positive mothers who are still in care in the review period	42% (30 sites)	

Baseline data for the 60 implementing partner-supported sites that are participating in collaborative improvement activities are presented in Figure 18.

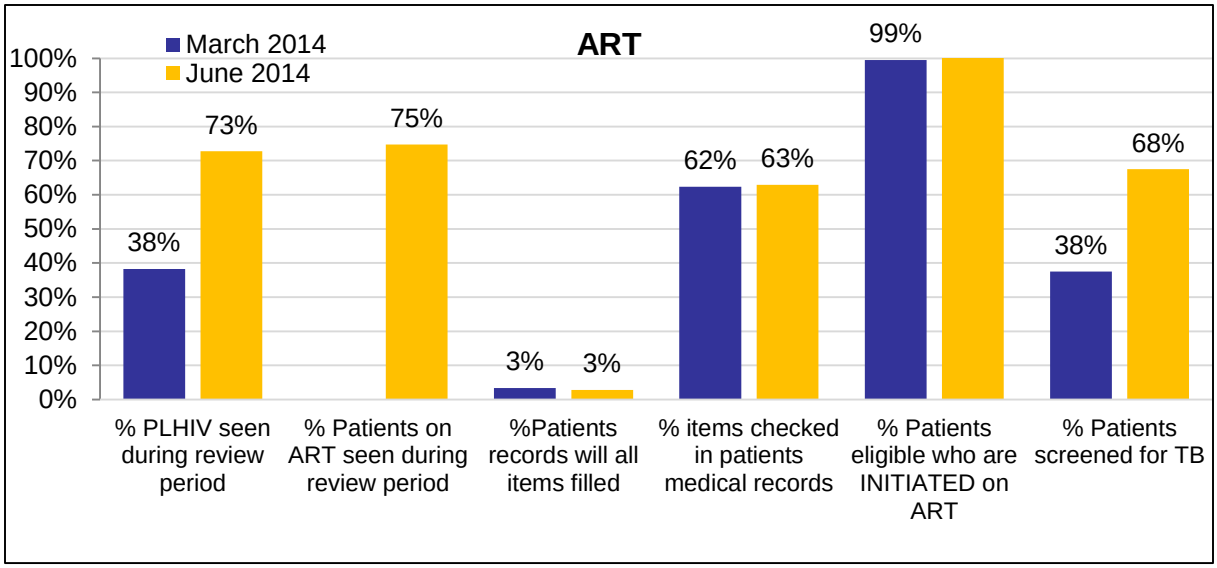
Figure 18: Cote d'Ivoire: Baseline performance of health facilities supported by PEPFAR clinical partners, 23 health regions (Jan-March 2014)



Because PEPFAR has instructed ASSIST to only visit facilities together with implementing partners, it has been a challenge to engage IP staff in visiting sites to review progress on improvement activities. By the last quarter of FY14, ASSIST was able to visit and obtain data from only 13 of the 60 sites. Figure 19 shows results of improvement work from the 13 sites that ASSIST was able to visit with

implementing partners.

Figure 19: Cote d'Ivoire: ART performance data from 13 PEPFAR partner-supported facilities, (March and June 2014)



Activity 2. Support the WHO/CDC Laboratory Quality Improvement Process Towards Accreditation (SLIPTA)

Recognizing the critical need for laboratory strengthening, Cote d'Ivoire adopted national laboratory policy guidelines to implement the WHO AFRO Stepwise Laboratory Improvement Process Towards Accreditation (SLIPTA) in laboratories from two cohorts. The accreditation preparedness process is coordinated by the MOH through three central institutions that represent the national Accreditation Technical Working Group: Centre Régional d'Evaluation en Education, Environnement, Santé et d'Accréditation en Afrique (CRESAC), Laboratoire National de Santé Publique (LNSP) and Institut Pasteur de Côte d'Ivoire (IPCI). Under HCI, 12 national coaches (assessors) were trained and provided assistance to strengthen laboratory capacity. They supported laboratories to meet the accreditation checklist requirements. The checklist includes five steps (each step is rated by one star). Coaching visits and mentorships were conducted by these assessors. In FY14, USAID ASSIST conducted laboratory improvement activities in 15 of 21 laboratories from the first cohort, and 10 of 21 laboratories in the second cohort for the quality improvement process towards accreditation.

KEY ACCOMPLISHMENTS

- Assessed 21 laboratories involved in the process towards accreditation (Q1).
- Conducted coaching visits to five of 21 laboratories (Q1).
- Conducted workshops to debrief on results of the Strengthening Laboratory Management Towards Accreditation (SLMTA) process assessment: February 11-12, 2014 for laboratories from Abidjan; February 11-14, 2014 for laboratories throughout the country.
- Organized a coordinating meeting to identify the next steps of WHO-AFRO program after debriefing (March 14, 2014).
- Organized a coordination meeting to identify a new cohort of laboratories for the new SLMTA initiative (March 24, 2014).
- Conducted the baseline assessment for the new cohort of 30 laboratories involved in the WHO/AFRO process (May-June, 2014).
- Organized the SLMTA workshops for the new cohort of 25 laboratories to be included in the process toward accreditation (July 14-25, 2014). ASSIST organized the first session of SLMTA for the 11 laboratories from Abidjan, Adzopé, Agboville, Bingerville and San Pedro (July 14-18, 2014). The second session was conducted in Yamoussoukro for 19 laboratories (July 21-25, 2014).

Activity 3. Improve the strategic information system

An assessment performed in 2012 by the MOH in collaboration with MEASURE Evaluation on the health information system at all levels of the health pyramid showed a weak data feedback system of health information/data, a lack of supportive supervision, poor competence of staff in data analysis and data use for activity management, as well as a lack of availability of policy documents around strategic information. To respond to such need, under the leadership of the MOH and MEASURE Evaluation, USAID ASSIST in FY14 supported the development of a policy document to address National Health Information standards for each level of the health system.

KEY ACCOMPLISHMENTS

- Conducted informational and preparatory meetings with the National Health Strategic Information Department (DIPE) and MEASURE Evaluation for the development of standards for the use of health information for decision making (Q1).
- Currently developing the first draft of the standards on data use for decision making which will be sent to the other partners involved in the process (DIPE and MEASURE) for inputs. As a next step, USAID ASSIST, DIPE and MEASURE will meet to obtain the draft version of standards that the Technical Working Group will use.
- Organized with DIPE three preparatory meetings from August-September 2014 to move forward on the process for the development of the National Strategic Information Standards (August-September 2014). Due to one major stakeholder not being available during the process (MEASURE Evaluation, which closed out activities in Cote d'Ivoire), the activity has slowed down. However, this activity was rescheduled to start early October 2014.

SUSTAINABILITY AND INSTITUTIONALIZATION

USAID ASSIST is building the capacity in QI of the key MOH QI units (SPAQS), National HIV/AIDS Care and Treatment Program (PNLS) and the National Health Information System (DIPE). These units are gaining on-hand experience in co-facilitating and supporting QI work with implementing partners. This process will not only lead to informed QI for national policy and strategy development but create learning opportunities for conducting advocacy for resource mobilization and other initiatives on QI. The partnership with IPs will over time produce quality improvement integrated into care delivery as an integral part of the package. USAID ASSIST in collaboration with the MOH will support the review of national HIV/AIDS care and support tools to include quality improvement items and performance reviews. The integration of QI indicators into the national health strategic information system is key to institutionalizing the initiative. Integration of quality improvement and performance review topics in national forums at all level of the health pyramid will also be necessary to continue raising awareness on the need for quality services.

In addition in order 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

Starting in FY14, the USAID ASSIST Project is supporting the Ministry of Health in the Democratic Republic of Congo (DRC) to improve nutrition services for HIV clients through integration of nutritional assessment, counseling, and support (NACS) into HIV care and treatment, in coordination with other implementing partners. The three key partners in charge of jointly implementing NACS in DRC are: 1) FHI 360's Food and Nutrition Technical Assistance Project (FANTA); 2) Livelihoods and Food Security Technical Assistance project (LIFT), and 3) ASSIST. ASSIST is in charge of integrating a QI component into NACS.

Scale of USAID ASSIST's Work in Democratic Republic of Congo

HIV/AIDS (including OVC)

MOH, 5 Implementing Partners

16 facilities

16 Quality Improvement Teams

16.9 mililon out of 72.5 million

PROGRAM OVERVIEW

Activities	What are we trying to accomplish?	At what scale?	Improvement Activity	Activity
1. Quality improvement technical assistance for integrating NACS into HIV care and treatment services	Improve management and nutritional status of malnourished HIV clients by: • Integrating NACS into facility-based ART, PMTCT and MNCH services • Strengthening the capacities of district health managers and care providers to apply improvement skills	ASSIST will be working with 16 QI teams in 16 facilities in 2 districts (Kinshasa Centre and Lubumbashi) in 2 provinces (Kinshasa and Katanga). The 2 provinces cover 16,936,867 inhabitants out of 72,505,278 in DRC	X	

Activity 1. Quality improvement technical assistance for integrating NACS into HIV care and treatment services

KEY ACCOMPLISHMENTS

- **Joint trip to DRC with partner organizations to determine NACS opportunities** (Q2**):** At the request of USAID/DRC, FANTA, LIFT, and ASSIST made a joint trip to DRC in order to assess opportunities to integrate NACS into HIV care and treatment services in the country, including referrals of NACS clients between health care facilities and economic strengthening, livelihoods, and food security support and quality improvement of NACS services.
- **A joint work plan was developed from which ASSIST will run these key activities:**
  - Implement a collaborative improvement approach in Kinshasa and Katanga provinces for a rapid improvement of NACS activities in 16 sites.
  - Build capacities of health system managers for QI institutionalization in the health system mainly for people living with HIV (PLHIV).
  - Conduct supportive supervision and coaching sessions to improve quality of services.

- Implement a NACS monitoring and evaluation plan to be integrated into the National M&E System.
- Develop an extension plan based on lessons learned from initial NACS sites review.

- **Agreed upon target sites and provinces for the intervention** (Q2). Sixteen facilities were selected for the initial NACS intervention in the two provinces of Kinshasa and Katanga (city of Lubumbashi).
- **Jointly conducted a training and site visits to introduce NACS integrated curriculum to target sites** (Q3). ASSIST together with FANTA and LIFT introduced an innovative NACS integrated curriculum, including processes, economic strengthening and quality improvement components. ASSIST along with partners trained 64 local trainers and supervisors from the 16 sites. In addition, the team helped designate internal and external coaching teams for each site and defined their roles and responsibilities, as well as outlined next steps of the joint initiative.
- **Conducted a coaches training and completed a joint visit to all target sites** (Q4)**:** ASSIST-trained coaches from the MOH and implementing partners conducted a visit to all the 16 target sites in both Katanga and Kinshasa provinces.
- **Provided technical assistance to newly-trained site representatives** (Q4)**.** The newly trained representatives from these sites implemented a variety of changes in order to create a positive environment for NACS activities (Table 1).

Table 1: Democratic Republic of Congo: Changes implemented at NACS target sites (July-Sept 2014)

NACS Improvement Objectives	Changes implemented
1. Improve nutritional assessment of people living with HIV	• Reorganization of teamwork to comply with NACS processes • Assuring availability of essential inputs for anthropometric measures (scales, height rods, mid-upper arm circumference measurement tape) for adults and children at the point of contact with NACS target groups • Job aids on anthropometric measurements and nutritional classification • Modifying registers to add columns to record weight and other anthropometric measures to encourage providers to systematically consider these items • Gradual integration of nutritional assessment in NACS target services • Integration of arm circumference in the anthropometric parameters
2. Improve quality of nutritional counseling during NACS activities	• Provision of nutritional counseling job aids (counseling map) by GATHER • Counseling according to the nutritional status of PLHIV after the nutritional classification
3. Improve support activities	• Setting a special register for nutritional surveillance of PLHIV • Providing an additional register for PLHIV that contains information on the nutritional status of the patient • Monthly report sent to the central office
4. Integrate NACS into PMTCT services	• Review of PMTCT process in order to integrate NACS activities • Systematic assessment of the nutritional status of HIV-positive pregnant women at each visit • Pregnant women with clear signs of malnutrition are evaluated and classified accordingly

EAST AFRICA REGION

BACKGROUND

Starting in January 2013, the USAID ASSIST Project has provided technical assistance and support to the Regional Centre for Quality of Health Care to develop and validate a health quality improvement core competency framework. The competency framework builds on a regional stakeholder meeting convened by HCI in October 2011.

PROGRAM OVERVIEW

Activities	What are we trying to accomplish?	At what scale?	Improvement Activity	Activity
1. Technical assistance and support to the Regional Centre for Quality of Health Care (RCQHC) to develop and validate a Health Quality Improvement Core Competency Framework	• Build RCQHC capacity in methodologies to develop, validate, and apply competency frameworks • Provide technical guidance at each stage of the development and validation process	East Africa Region		x

Activity 1. Technical assistance and support to the RCQHC to develop and validate a Health Quality Improvement Core Competency Framework

KEY ACCOMPLISHMENTS

- **Finalized, revised and re-scoped competency framework in response to technical reviewers' feedback.**
  - Supported RCQHC to manage a modified Delphi approach to ensure content validity of the competency framework. The approach is comprised of two rounds of independent technical review by a group of 12 improvement experts (ASSIST, WHO, MOH, ICAP, PATH). Templates developed in excel to ascertain level of agreement on competency framework content and obtain input on revisions, additions and improvements. The draft framework and reviewers template sent to all experts on November 5th 2013. On January 17, 2014 RCQHC and ASSIST met to review responses and discuss revisions for competency framework content for which consensus was not achieved (<90% agreement amongst reviewers).
  - Coached RCQHC staff over multiple Skype calls between February–May 2014 to review all feedback from reviewers and make decisions on revisions of the framework's content.
  - Decided to re-scope the competency framework to focus on basic improvement competencies required to undertake single-site improvement. Reviewer comments on the advanced competencies included in the first draft recognized the limitations of the draft content related to advanced competencies – requiring major rework and revision. Competencies that RCQHC is most focused on are basic competencies, and this aligns well with their mandate. Possibility of developing an advanced competency framework in the future could be explored when more resources and time could enable this. The competency framework is expected to be finalized in 2015.
- **East Africa Regional Workshop "Towards integrating improvement competencies into health worker education and training"** was held December 11-13, 2013 in Nairobi, Kenya and hosted by the RCQHC with technical support from ASSIST (Tana Wuliji, Esther Karamagi/Uganda, Subiri Obwogo/Kenya). Five countries participated: Kenya, Tanzania, Burundi, Uganda, and Rwanda. Participants included Ministry of Health Heads of Quality Assurance, Teaching hospitals, Deans/Heads of medical/public health/nursing academic institutions, and nursing councils/unions. Workshop objectives were achieved, including:

1. Complete review of competency framework to provide feedback on layout, structure, clarity and suggestions on the framework's dissemination and use
2. Share current country situations and lessons learnt on integration of improvement competencies into health worker education and training
3. Self-assess strengths, weaknesses, opportunities, and threats (SWOT analysis) and readiness towards integration of improvement competencies into pre-service education and training
4. Brainstorm next steps at regional and country level to move the agenda forward

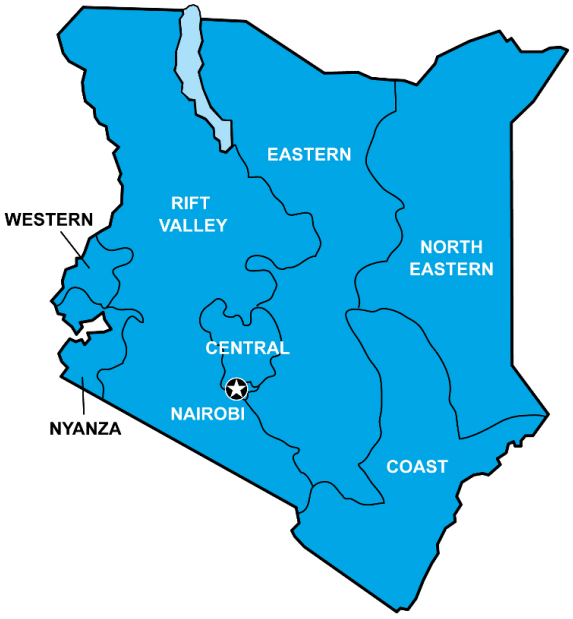
- Each country set country-specific strategic objectives and brainstormed specific actions to be taken towards integration of improvement competencies, taking into consideration current strengths, weaknesses, opportunities, and threats.
- Interest amongst countries for regional cooperation towards common goal of integrating improvement competencies: e.g., establishment of a regional technical committee, sharing of technical resources (curricula etc.), sharing of challenges and lessons learnt through a community of practice, learning visits between countries, information system to track progress and share experiences (e.g., portal, regional database).
- Technical and resource support were identified by each country that would be required to develop/strengthen curricula, build academic capacity to teach improvement, evaluate effectiveness, and facilitate learning between countries.
- Country plans developed by each country team towards integrating improvement competencies into health worker education and training could be potentially supported by ASSIST or other projects.

KENYA

BACKGROUND

In Kenya, the USAID ASSIST Project builds on the work of HCI and aims to support the Ministries of Health (MOH), the Ministry of Labor, Social Security and Services (MLSS&S), and the National AIDS and STI Control Program (NASCOP) and other relevant partners such as the United States Government (USG) implementing partners and county governments to design, develop, and implement strategies that will enhance the quality of service delivery in the health sector and the care of orphans and vulnerable children (OVC) in the country. The ASSIST approach is guided by the National Health Sector Strategic Plan II and MLSS&S priorities for improving quality of services for vulnerable children.

Scale of USAID ASSIST's Work in Kenya



HIV/AIDS (including OVC)

MOH, MLSS&S, NASCOP, 9 IPs

~530 facilities

387 communities

~800 Quality Improvement Teams

Health: 33 out of 47 counties

OVC: 43 out of 47 counties (600k/2.4m)

PROGRAM OVERVIEW

Activities	What are we trying to accomplish?	At what scale?	Improvement Activity	Activity
1. Country ownership and institutionalization of quality improvement at the national level	• Support development of a national QI policy, standards and syllabus in collaboration with the National AIDS and STI Control Program (NACSOP), Family Health, Primary Health and Directorate of Health Standards, Quality Assurance and Regulations, and other key stakeholders to institutionalize QI in health care • Strengthen national systems that support application of QI techniques to improve integrated health outcomes, especially for HIV care, treatment, and support, including OVC, eMTCT, and MNCH/FP/RH.	National & County		x
2. Capacity development in QI	• Provide training on the science of improvement and developing QI teams (QITs) and work improvement teams (WITs) in high- volume facilities in collaboration with the USAID|Kenya service delivery partners, including APHIA+s, AMPATH Plus, and COGRI, to drive the scale-up of QI	33 counties		x

3. HIV care and treatment	• Provide QI support to county governments and the USAID|Kenya service delivery partners, including APHIA+s, AMPATH Plus, and COGRI, to strengthen and improve the HIV chronic care model and to bring and retain more adults and children in HIV care and treatment	-National -33 counties -At least 6 USG partners (APHIA+ partners) -At least 10 high volume facilities in each county that are supported by USG partners, to support the trickle down to other levels ASSIST will continue to work with the USG partners to cascade the QI capacity development in the FY15		x
4. OVC and child protection	• Strengthen systems at national and county government levels to support the institutionalization of QI in child protection and OVC programs to improve the welfare of children • Provide TA to county governments, the USAID|Kenya service delivery partners including APHIA+s, AMPATH Plus, and COGRI, to apply QI techniques to strengthen care for vulnerable children and their households	National: at least 8 county demonstration sites and 9 USG partner sites TBD by USG partners and MLSS&S	x	
5. Maternal, newborn, and child health (MNCH) and reproductive health (RH)	• Provide QI support to county governments and the USAID|Kenya service delivery partners, including APHIA+s and AMPATH Plus, to improve and strengthen MNCH and RH services in Kenya	National, facility and country levels	x	
6. Malaria	• Apply QI techniques and, in collaboration with county governments and USG implementing partners, strengthen capacity in program management to achieve malaria programme objectives at all levels of the health care system	National, county and service delivery levels	x	

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

KEY ACCOMPLISHMENTS

Health Care QI

ASSIST has been working with the Directorate of Health Standards, Quality Assurance and Regulations under the MOH in developing a health QI policy that will guide the country in institutionalization and roll-out of QI in the sector. Towards this end, a number of steps were accomplished.

- **Supported the directorate in conducting the situational analysis and review of standards and clinical practice guidelines** (Q3). As part of the situation analysis, ASSIST conducted stakeholder mapping, analysis, and engagement in order to understand the different health care stakeholders and their roles. In addition, ASSIST supported a situation analysis validation workshop where over 50 stakeholders were represented, including the MOH, development

partners, and USAID Kenya implementing partners. From the workshop six priority areas were identified. The next critical steps towards finalization of the policy include defining a plan of action to address the six priority areas and defining the monitoring and evaluation plan for the policy implementation process in order to keep track of progress and to ensure that the policy is operationalized.

- **Supported the Directorate of Health Standards, Quality Assurance and Regulations under the MOH in developing system-level quality improvement objectives** (Q3)**.** ASSIST began helping the directorate determine national improvement priorities; this work will continue in FY15.

Quality improvement survey tool (county and facility)

- **Supported the Directorate of Health Standards, Quality Assurance and Regulation in developing quality improvement survey tools for the counties and facilities**.
  - **ASSIST supported the piloting of these tools in three counties (Kisumu, Kajiado, and Machakos) and 48 facilities** (Q2-3). During Q4, ASSIST supported the Ministry in analyzing the pilot data and writing the pilot report. Areas that performed the worst were scored 1 and those performing best (excellent) were scored 4. Table 2 shows that the counties and their facilities were not performing well in most of the thematic areas. This information is critical as ASSIST scales-up QI across the countries.

Table 2: Kenya: Summary average scores per county per service area (Q2-Q3 FY14)

Thematic Area	Average score		
	Kisumu	Machakos	Kajiado
Access to services	1.67	1.25	1.70
Insurance coverage	2.22	1.27	1.63
Financial management	2.44	3.69	2.32
Health leadership and governance	1.72	1.69	1.32
Client satisfaction assessment	2.39	1.88	2.06
Staff satisfaction assessment	2.00	1.38	2.20
Infrastructure for health service delivery	3.22	1.53	3.44
HMIS	4.06	3.25	4.00
Referral and transport	2.06	2.13	2.21
Malaria	1.22	1.13	1.22
Infection prevention and control	3.79	4.81	4.08
MNCH/RH	2.81	2.98	2.94
HIV and AIDS	3.29	3.53	3.47
Oral health	1.57	3.29	2.43

Portal containing clinical practice guidelines exists and is regularly updated for easy access

The Constitution of Kenya (2010) requires that its citizens access the highest possible health care at any one time. To be able to provide this high standard of health care to people, there is need for standards to guide each health practitioner to offer quality services. In the country, the biggest challenge for health practitioners has been to access these standards and especially current ones.

- **Developing a portal containing clinical practice guidelines** (Q4)**:** The Directorate of Health Standards, Quality Assurance and Regulation requested ASSIST to help them develop a portal accessible to all health providers with the most recent approved standards for care. ASSIST hired a consultant to help develop tools for evaluating the current clinical standards and guidelines and standard operating procedures (SOP) to guide the evaluation process.

- **Supported National AIDS/STI Control Program** (**NASCOP) in developing HIV QI Framework, PMTCT training package, and revision of HIV tools:** To ensure institutionalization and sustainability of QI, ASSIST has continued to work with the Directorate of Preventive and Promotive Services and NASCOP to develop various documents that include:
  - Finalization of the Kenya HIV QI Framework, operational manual, and accompanying training package. The documents are now awaiting Ministry approval.
  - Development of the national PMTCT training package including job aids. Piloting of the documents was conducted in Kirinyaga County on September 23-27, 2014. Revision of the current national HIV data tools is ongoing and will continue into FY15.
  - Development of the protocol for assessment of the impact of peer support on PMTCT program outcomes- Phase 1 complete. Awaiting approval from Ethics Review Board.

Children services, community health and OVC

- **ASSIST has been supporting the Department of Children Services in the development of an OVC Psychosocial Support (PSS) guidance document**. During September 2014, ASSIST supported a retreat where the zero draft PSS guidelines was developed. The zero draft is currently under review. In addition, ASSIST supported the development of the final drafts of the Child Service Provider mapping tool and national referral tool for child protection. The tools have been endorsed by the National Council for Children's Services. A workshop to finalize the PSS standards was held from August 18-22, 2014 with 14 participants. The MLSS&S is currently finalizing their feedback to input into the final document for editing.

Activity 2. Capacity development in QI

KEY ACCOMPLISHMENTS

- **Held a meeting to develop county QI plans for OVC and child protection for 10 counties in Western Kenya** (Q3). A major outcome of the meeting was the identification of county-specific QI coaches who will work with both USG and non-USG partners to mainstream QI in OVC programs.
- **Printed and distributed 2000 copies of the national caregiver manual through the National Council for Children Services** (Q1-2).
- **Provided training on the science of improvement and developing QITs and WITs to 10 counties and in high-volume facilities (from the same counties) in collaboration with the USAID Kenya APHIA+s to drive the scale-up of QI** (Q3).
- **Developing mechanisms for data quality improvement (data validation).** As a follow-up to the ongoing QI trainings, ASSIST is engaging the different USAID service delivery mechanisms in developing mechanisms for QI data collection and validation.

APHIA plus Kamili

- **ASSIST together with APHIA plus Kamili held a 5-day QI training in Kiambu County where 41 health care workers and managers were trained in QI** (Q3)**.** At the same time, ASSIST supported orientation of a further 240 health managers from 4 counties.
- **Scale-up process began in April 2014 targeting 11 counties in APHIA plus Kamili zone.**
- **ASSIST and APHIA plus Kamili met in June 2014 for an M&E review meeting.** The aim of the meeting was to establish a sustainable way of ensuring data quality in health facilities.
  - One of the change ideas to be applied will be to establish county data quality sub-committees immediately after the QI trainings. These committees will be all inclusive, pulling from county, sub-county health records information officers, facility health records information officers, and representatives of the IPs. The role of the team will be to lead the data analysis for QI work within the county. The team will be accountable to the county QIT and management.
  - It was agreed that a data quality assessment (DQA) will be conducted to measure the success or failure of the data quality improvement process. The DQAs will be conducted by a team consisting of the facility management, facility QIT team, APHIA Kamili M&E officer, APHIA Kamili technical team, an MOH representative, and where possible an ASSIST representative. At the beginning of the process, a baseline DQA will be conducted and a target DQA score set

for the facility. The team will also look for the root causes of the data quality issues and suggest a few change ideas that require low resources but are believed to have high impact. A plan of action will then be created.

- On a monthly basis, the APHIA M&E office together with the facility management and facility QIT team will conduct DQAs to measure the progress of improvement and check which change ideas seem to be working and which need changing. The team will document the process and keep records of the process. After 6 months of testing the changes and improvement progress, an evaluation will be conducted by the same team that did the baseline DQA to ascertain that improvement did occur. Changes that led to improvement will then be consolidated, discussed by the county data quality sub-committee, and implemented in additional facilities. To start the process, the team agreed on 10 facilities which will be used as pilot sites for data quality improvement (validation).

- During Q4, a follow-up QI meeting was held with the Machakos County Health Management Team where a QI plan was developed, a county QI focal person was appointed and coaches were identified who were attached to the 10 high-volume facilities.
- In Kiambu County, after the QI training meeting was held where the 17 county health managers were updated on QI, the CHMT appointed a county QI focal person and 14 QI coaches who will be attached to the 14 high-volume facilities and selected the priority county indicators. ASSIST supported the Kiambu County to convene a subsequent meeting where 11 high-volume facility representatives presented their baseline data and their planned PDSA activities.

APHIA plus Nairobi-Coast

- **ASSIST supported two 5-day QI trainings in collaboration with APHIA plus Nairobi-Coast and Mombasa, Taita Taveta and Lamu counties** (Q3)**.** A total 96 participants (county managers, partners, facilities, comprehensive care centers, maternity staff, MCH-PMTCT staff) were trained.

APHIA plus Western

- **Together with APHIA plus Western, ASSIST supported QI sensitization and trainings in four counties around the western part of the country** (Q3)**.** During the training, a total 113 facility staff from 42 facilities, 34 county and sub-county health managers, and 22 partners were trained.

APHIA plus Nuru ya Bonde

- **ASSIST supported two QI trainings in Baringo and Narok counties together with APHIA plus Nuru ya Bonde and the Baringo and Narok CHMTs** (Q3)**.** A total of 93 health workers, health managers, and APHIA plus Nuru ya Bonde staff were trained. In addition, 16 County Health Management Team (CHMT) members in Narok were trained on QI, and 60 health workers from two high-volume facilities were sensitized on QI principles. Post-training follow-up QI meetings were held in five facilities in Baringo County, 10 facilities in Narok County, and two facilities in Nakuru County.

APHIA plus Imarisha

- **Supported three QI trainings in Turkana, Marsabit and Samburu counties in partnership with APHIA plus Imarisha and the respective counties.** The training included comprehensive care centers, MNCH, maternity staff as well as MOH health managers. In total, 26 MOH staff were trained in Turkana, 28 in Marsabit, and 29 in Samburu.
- **ASSIST together with the APHIA plus Imarisha developed a plan for QI data collection and validation (data quality improvement) within APHIA plus Imarisha-supported sites** (June 2014)**.** During the planning meeting, the final list of QI indicators was discussed and agreed upon.
- **Preliminary data quality assessment (DQA) results for one of their site (Isiolo county referral hospital) were presented and discussed** (Q3)**.**
- **ASSIST supported a QI training in Samburu County where 52 participants from six high-volume facilities covering HIV Care and Treatment Centres, MCHs units, and maternity units were trained** (Q4). During the training, the 2014 Guidelines on Use of Antiretroviral Drugs for Treatment and Prevention of HIV were rolled out as well.
- **ASSIST supported four post QI training continuing medical education sessions (CMEs) in Isiolo and Samburu counties** for two high-volume facilities. ASSIST had collaborative in-service

ART trainings with Funzo Kenya (IntraHealth) in Isiolo and Samburu counties, where ASSIST trained participants on QI. ASSIST also supported the launch of the Isiolo Health 2013-18 Strategic Plan with QI embedded in health service delivery.

AMPATH plus

- QI sensitization was provided to 22 AMPATH senior managers (Q4). ASSIST trained 36 AMPATH technical officers on QI and then supported AMPATH to develop a work plan for QI implementation (Q4).

APHIA plus Western

- ASSIST supported 2 QI trainings in Migori and Kakamega counties, which included 43 participants from 15 high-volume facilities in Migori County and 42 participants from 10 high-volume facilities in Kakamega County (Q4).
- ASSIST supported a number of CMEs as part of the post QI training agenda. Five CMEs were held in Nyamira, Homabay, Kisumu, and Busia counties where the high-volume facilities and the county team selected their priority indicators for follow-up. The facilities from Homabay also presented their baseline data whereas those from the 3 other counties were still collecting their baseline data. All facilities are in the process of doing their root cause analysis (Q4).

Nutrition in HIV Training

- ASSIST conducted a QI orientation for seven nutritionists from the NASCOP Nutrition Department where the NACS model of nutrition quality improvement was introduced and adopted (Q4). As part of the post training agenda, nutritionists from NASCOP have been trained as trainers for the scale-up and post training NACS agenda. Twenty-four Work Improvement Teams from Nyamira, Busia and Nakuru counties engaged in the PDSA cycle specifically on the NACS proxy indicators.

Activity 3. HIV care and treatment

KEY ACCOMPLISHMENTS

- **Held QI trainings and post training CMEs** (Q4).
- **NASCOP with support of implementing partners developed QI indicators for different HIV service areas** (Q4)**.** The indicators were then shared with all USAID IPs. ASSIST has been in consultation with the IP teams to ensure that baseline and follow-up data for these indicators are being collected. A number of partners collected baseline data for their sites (Q4).

APHIA plus Western: Homabay and Nyamira counties

- **The APHIA Western team collected baseline data from seven high-volume facilities from Homabay County which is performing below national targets on almost all of the adult HIV care QI indicators** (Q4). ASSIST and APHIA Western will work with the work improvement teams from these facilities.
- **APHIA Western supported Nyamira County's five high-volume facilities to collect baseline data for adult HIV care and treatment indicators** (Q4). A few of the indicators met the national target, and ASSIST and APHIA Western will work with the work improvement teams from these facilities to raise performance on others.

APHIA plus Imarisha

- **APHIA plus Imarisha collected baseline HIV care and treatment data from Isiolo County while the remaining counties are collecting baseline data** (Q4). In January 2014 in Isiolo, the percentage of HIV-infected patients in care with at least one CD4 count in the previous 6 months was 9%. It fluctuated over the following months and in August was 6%.

Pediatric HIV care and treatment

- For pediatric HIV care and treatment, APHA plus Western supported two counties (Nyamira and Homabay) to collect baseline data from the high-volume facilities. In both of the counties, the indicators performed below expectation with the exception of a few indicators. The work improvement teams are being supported to do their root causes and identify the change ideas.

- For APHIA plus Isiolo, in January 2014, the percentage of children on ART for at least six months with viral load suppression was 0, but by August it was 23%.In January 2014, children 8-14 years old whose HIV status had been disclosed was 23% at one site in Isiolo. By August this had increased to 37%, with 33% of females and 41% of males having been disclosed.

Nutrition for HIV

- **Nutrition assessment, counselling and support indicators were integrated in the NASCOP HIV QI indicators** (Q4). All USAID implementing partners are required to collect baseline and follow-up data on the same. APHIA plus Western supported Nyamira County in collection of baseline data for the 5 NACS indicators.

Activity 4. OVC and child protection

KEY ACCOMPLISHMENTS

- **IEC materials for the social protection secretariat were developed and translated into four local languages (Kiswahili, Kikuyu, Luo and Kamba) for use by community members** (Q1-2)**.** The communication materials are aimed at promoting the work of the National Social Protection Secretariat and enhancing community engagement in social protection activities.
- **ASSIST supported the National Social Protection Secretariat to print 5000 copies of the national Social Protection Policy.** The copies will be disseminated to key stakeholders in social protection across the country. A two-day meeting to disseminate the policy was held in Q1 for the South Rift Region of Kenya with implementers drawn from Nakuru, Narok, Kajiado, Baringo, Kericho, Bomet, and Laikipia counties.
- **ASSIST supported the MLSS&S to launch the Psychosocial Services (PSS) situational analysis report in a national stakeholder's forum** (February 2014). A team of 10 organizations with key interests in psychosocial support was formed to support the Department of Children's Services (DCS) and the QI technical working group to provide direction to develop the framework.
- **In March 2014 a national consultative forum was held for the county coordinators for children services, ASSIST, and USG partners.** The meeting helped identify county priorities for mainstreaming QI in the department's activities. Among the key resolutions made were:
  - Lobbying the DCS to include QI activities in the officers' national work plans and performance contracts; USG partners and the DCS to hold joint work plan meetings, reporting forums and review meetings; and the DCS to take leadership in driving the QI agenda and bring onboard non-USG-funded partners in their regions.
- **ASSIST jointly with the APHIA Plus implementers mapped Volunteer Children Officers (VCO) in the country and have a database of all VCOs drawn from the 25 counties supported by USAID** (Q1). The database will help plan for the trainings of the officers and link them to CBOs implementing QI interventions for additional community level coaching and mentorship.
- **APHIA plus Nuru ya Bonde, APHIA plus Western Kenya, APHIA plus Kamili, APHIA plus Imarisha, and AMPATH plus have continued working with the Department of Children Services in 43 counties in ensuring institutionalization of QI at the point of service delivery in child protection and improvement of child welfare** (Q1-2)**.** Through the support from the QI teams, the projects are rolling out sustainable interventions in addressing issues affecting children.
- **A five-day coaches training was conducted for new USAID partners** (Wezesha Project and Ananda Marga Universal Relief Team (AMURT) (Q1). The coaches now work with community level teams to mainstream QI at the point of care. The two projects have six community QI teams.
- **Conducted quality improvement coaching and mentorship visits to all implementing partners** (Q3-4). Table 3 shows the progress of the QI teams under the different USAID implementing partners, as of September 2014.

Table 3: Kenya: Progress of QI teams of USAID implementing partners (October 2013 – September 2014)

Project	No of QI teams	Status
APHIA plus Nuru Ya Bonde	21	Efforts were made to enhance capacity of the teams through mentorship and coaching and progress has been realized. Four teams received refresher training during the reporting period
APHIA plus Western Kenya	47	The teams were faced with financial challenges within the reporting period since APHIA Plus Western's work plan had not been approved
AMPATH plus	16	Nine QITs are new and are in the formative stages. Four additional QITs were trained in this quarter.
Wezesha Project	4	The four teams in Migori, Homabay, and Kisii counties) were established between February and March. The teams have been trained and are in the process of carrying out CSI. The project had transitional challenges that stalled their work.
APHIA plus Nairobi-Coast	47	QIT mentorship sessions continued in APHIA Plus Nairobi-Coast. APHIA Plus Nairobi conducted a harvest meeting which brought together 50 participants drawn from 20 local implementing partners supported by APHIA Plus Nairobi. 13 of the teams were the older teams from whom the change ideas were harvested, while 7 teams are newly formed and came for learning purposes.
APHIA plus Imarisha	34	18 QI teams are dormant due to ranging insecurity and drought since the project covers arid and semi-arid regions of Kenya which are mostly affected by inter-clan conflicts because of limited pasture land and water for their animals.
APHIA plus Kamili	178	123 of the 178 QI teams are active. This partner has continued doing well in rolling out QI. QI team validation done in August 2014 showed that the teams are alive, implementing QI, and heading towards sustaining the gains made so far. There is a very strong involvement of the Department of Children Services and the community in the areas the QI teams work in.
AMURT	2	The teams have carried out CSI and analyzed the data. They are in the process of implementing their change ideas.

APHIA plus Nairobi

- **Conducted a CSI and self-assessments on children** with the KENWA QI team in Naiatobi, the Kisumu Ndogo CBO Kin Kilifi County, the Bura QI team in Taita Taveta County, the AIC Kusuu Ndogo QI team in Mlindi, and the Rofi QI team (Q1-3).
- **Conducted harvest meeting** (Q4)**:** Meeting brought together 50 participants drawn from 20 local implementing partners supported by APHIA plus Nairobi. Partners shared change ideas that yielded better results since the introduction of QI. Some of the change ideas with good results were: introduction of voluntary savings and loan (VSL) groups, and start-up of income-generating activities as a long-term measure to improve households' economic ability to cater for the needs of vulnerable children; use of the local area administration for late birth registrations; establishing kitchen gardens for food security; organizing medical camps for vulnerable children; use of locally available materials to renovate dilapidated houses; and mentorship to improve education performance.
- **Kisumu Ndogo CBO Kilifi County**: The team conducted a CSI in January 2014 with 150 children. Child protection scored poorly. Discussions with the caregivers, community gatekeepers, and the children identified 100 children who were abusing drugs hence not attending school and spending most of their time in the streets or drug peddlers' dens. Change ideas: Work with the parents, teachers, the community, and the affected vulnerable children to help them address the dangers of drug and substance abuse in the community. Results: By March 2014, 110 community children were undergoing counselling and community mentorship to

address drug use related challenges. The children were followed up both at home and in school through linkages to community drug use peer education programs.

- **Bura QI team – Taita Taveta County**: The teams' work in Bura and Mwachabo locations of Mwatate Sub-county. After carrying out the self-assessment, the Bura QI team realized that most vulnerable children had challenges accessing health services, child protection, and food and nutrition. Because of poverty, guardians could not feed their children well, as the area is dry. Child labor existed for children living with sick or old guardians in the nearby sisal estates.
- **Chumvini QI team**: Results show an increase in the numbers of children rescued from drug use, reintegrated into the school system, and linked to community peer support programs through the change ideas that had been previously identified (May 2013).

APHIA plus Western

- APHIA plus Western Kenya had funding challenges between January and June 2014 which stalled much of the QI team activities at the point of care. Much work with the teams began in July but stalled again in September due to the same funding challenges.
- **Kanyamwa Mentors for Hope CBO QI team Homa Bay County:** Kanyamwa Mentors for Hope is a local CBO working in Homabay County. The CBO works with vulnerable children. The team was trained on QI in July 2014. The baseline data using the Child Status Index tool was collected in August 2014. Data analysis identified education as the service area that needed to be addressed. Further analysis revealed that performance among the children under support was poor. The team is currently developing change ideas to address this problem.
- **Bi Kanyipir:** The team was trained on QI in July 2014. The baseline data through the Child Status Index tool was carried out in August 2014. Data analysis identified education as the service area that needed to be addressed. Out of the 340 children sampled 54 had poor performance. The team developed the following change ideas in addressing performance in education: Involvement of the provincial administration and teacher to ensure children attend school regularly and support the formation of kids' clubs in schools to enhance peer learning.
- **AMURT- Inuka community-based project (ICOP):** AMURT- ICOP coaches were trained in December 2013; the coaches then supported the formation and training of community-based QI teams in East Asembo and South West Sakwa in Siaya County. The teams were formed in March 2014 with a membership of 15 each. Members of the QI teams are drawn from various professional backgrounds such as agriculturalist, educationist, administrators, and health practitioners, as well as caregivers, community health volunteers, and children from some households being supported.
- **South West Sakwa QI Team:** South West Sakwa QI team was formed in March 2014. The team consists of 15 members drawn from diverse professional backgrounds. Priority needs that were identified were birth registration, food security, and nutrition and growth. Change ideas were formulated to address these needs.

AMPATH plus

- The AMPATH OVC Program empowers orphans and vulnerable children, their families, and their communities to build a foundation of action and hope for a healthy and sustainable future by offering every eligible child within the AMPATH catchment area quality services in access to education, protection, shelter, food security, psychosocial support, medical care, and economic security. AMPATH supports over 20,000 children registered in the OVC program. AMPATH Plus currently has 16 teams that are spread in Trans Nzoia, West Pokot, Elgeyo Marakwet, Uasin Gishu and Busia counties. An example of the results from one of the teams is below.
- **Pioneer QI team**: This team is working on ensuring involvement of caregivers in their children's education to enhance school enrollment and attendance of 100 vulnerable children. Change ideas include: Ensure timely payment of school fees and other educational materials; enhance parents/caregivers' involvement in their children's education; encourage caregivers to join VSL groups in the community; mobilization of funds other sources including AMPATH plus, Constituency Development Funds, cash transfer etc.; and mobilization of guardians to form VSL groups.

APHIA plus Kamili

- **Hope Valley Family Initiative QIT** (HVFI) is a local implementing partner working in Nyandarua

County. It was started in late 2013 and is supported by APHIA plus Kamili. This is the second QIT team formed in the area after another one formed in 2012. HVFI works with 500 vulnerable children in Olkalau. The QI team sampled a total of 136 vulnerable children in Olkalau area for CSI administration in January 2014. After analyzing the CSI results in February 2014, the team identified that access to health care (preventive and curative) was an issue, as 97 out of the 136 sampled children were not able to access health services.

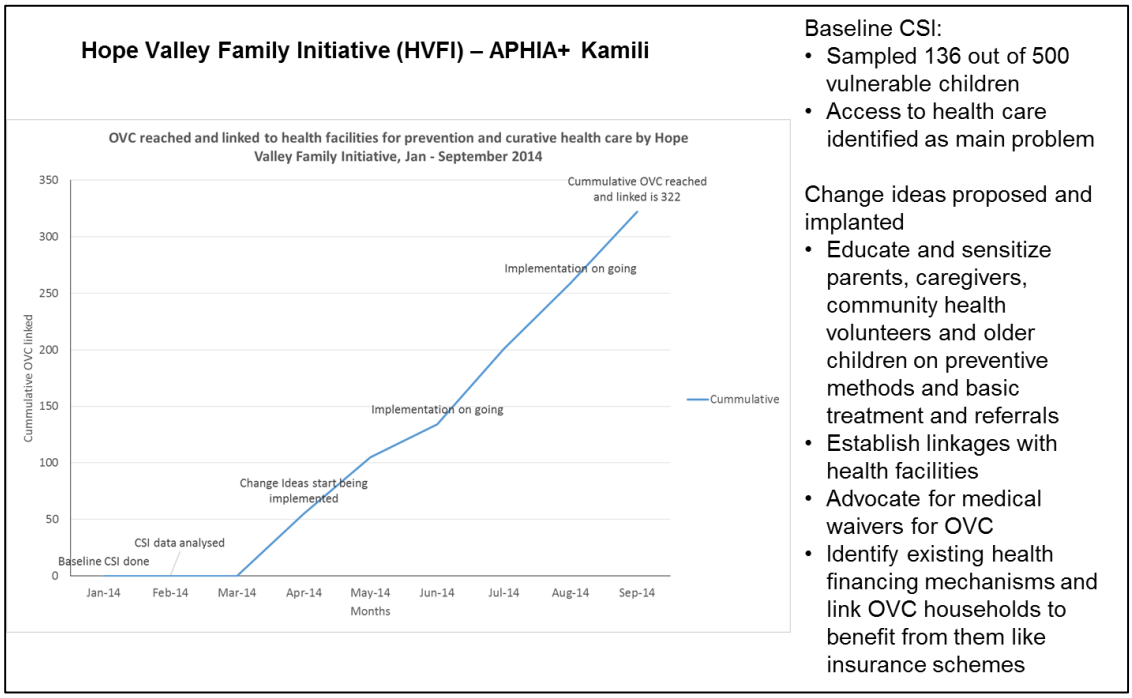
APHIA plus Western Kenya

- **Kawiri CBO Migori County:** Implementing change ideas, resulting from the July 2013 baseline assessment (July – December 2013): The team encouraged formation of smaller support groups of about five caregivers (Watano initiative). The Watano initiative was aimed at ensuring members acquired solar laps that their children can use for night studies, kitchen gardens, and smaller livestock that would boost for their household income and food security and that members joined saving and loan groups. They would then ensure all children are enrolled in school, attend regularly and are in child peer support groups. The team also identified certain activities that would directly involve the children such as the formation of education support groups where children in upper classes would support those in lower classes. To enhance girl child performance, the team set up a girl child mentorship program that was led by trained mentors. They also planned for education days where key stakeholders in education would be engaged to share various topics on education to create awareness on importance of education to both children and caregivers.
- **Wezesha and AMURT projects:** Wezesha identified three counties in which they would implement QI: Migori, Kisii, and Homabay counties. AMURT identified two sub counties (Bondo and Rarieda in Siaya County). The two projects consulted with the Department of Children Services at the county level through Coordinators and the Sub-county Children Services Officers and ensured that they provided leadership throughout the process. AMURT has two QI teams in Siaya County while Wezesha formed four QI teams in Homabay, Kisii, Migori, and Nyamira counties. All the new teams have been trained on QI. Trainings were carried out jointly with the Department of Children Services representatives and the partners.
- **Community Health Services:** ASSIST supported the MOH Community Health Services (CHS) Unit to host a meeting to share feedback on the results of the CHS situational analysis with stakeholder (December 2013). Participants included national and county officers drawn from the counties where data were collected. The situational analysis report highlighted the need to develop national standards and guideline for tier-one level of health service delivery. This will work in tandem with other efforts to streamline CHSs into the national and county health agenda and realign to the Kenya Quality Model (KQMH) framework to achieve basic quality health care for all.

RESULTS

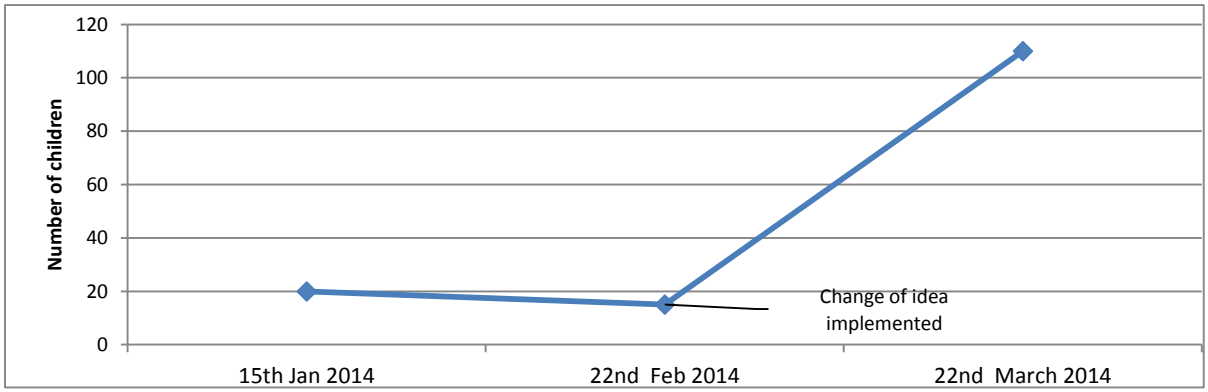
- **APHIA plus Kamili, Hope Valley Family Initiative:** A dramatic increase was seen in the numbers of vulnerable children reached and linked to health facilities through the change ideas that were proposed (Figure 20).

Figure 20: Kenya: Hope Valley Family Initiative (HVFI) – APHIA+ Kamili (Jan – Sept 2014)



- **APHIA Plus Western Kenya:** Improvement in performance was noted for both boys and girls in primary and secondary schools due to the work of the Chumvini QI team. The caregivers were able to help ensure that their children attended school and improved their performance. The peer support groups strengthened the drop-out monitoring system at school and curbed truancy since the children act as their own keepers (Figure 21).

Figure 21: Kenya: Number of children rescued from drug use, reintegrated into school system and linked to community peer support programmes, Chumvini QI team (Jan – March 2014)



Activity 5. Maternal and Neonatal Child Health and Reproductive Health

ACCOMPLISHMENTS

- **Provided QI technical assistance to county governments and the USAID Kenya service delivery partners, including APHIA pluses and AMPATH plus, to improve and strengthen MNCH and RH services** (Q3-4).

APHIA Plus Nairobi/Coast

- **Coast – Kwale County (PHFS):** NASCOP with support from ASSIST developed a mother-baby pair register to address the gaps of the current Early Infant Diagnosis (EID) register. The new register: 1) addresses gaps in retention of mother-baby pairs in active care and integration of

mother and infant care; 2) is a longitudinal register where the HIV-positive mother is registered on first contact with the ANC clinic and followed up to 24 months postnatally; 3) all the ANC, HIV, and postnatal services are included; 4) infant details are entered at birth and followed to 24 months. Through the PHFS work, ASSIST piloted the register in Kwale County. Some of the changes could not be have been achieved without the register, including the increase in the number of mother-baby pair still in active care. This has led to reduction in loss to follow-up of exposed babies. Beside the register, the work improvement team came up with a number of change ideas that have resulted in positive outcomes.

- Change ideas: Improved the filing system to effortlessly notice defaulters; integration of mother and HEI services into one file, one room, same time, and same health worker; iIntegration of EID into MCH/child welfare clinic from the laboratory; on job training to nurses to be able to take DBS specimen at the MCH; and placing job aids and reminders for key services to be offered to HIV-exposed children at all ages.
- In January 2013, only 16% of HIV-positive mothers delivered at the facility, but by May 2014 this had increased to 81%.

APHIA plus Western

- Since the introduction of the NASCOP QI indicators, APHIA plus Western in partnership with ASSIST supported Nyamira and Homabay counties to collect baseline data for these indicators (Q4). Homabay County performed below expectation in most of the indicators, whereas Nyamira had challenges in only a few of them.

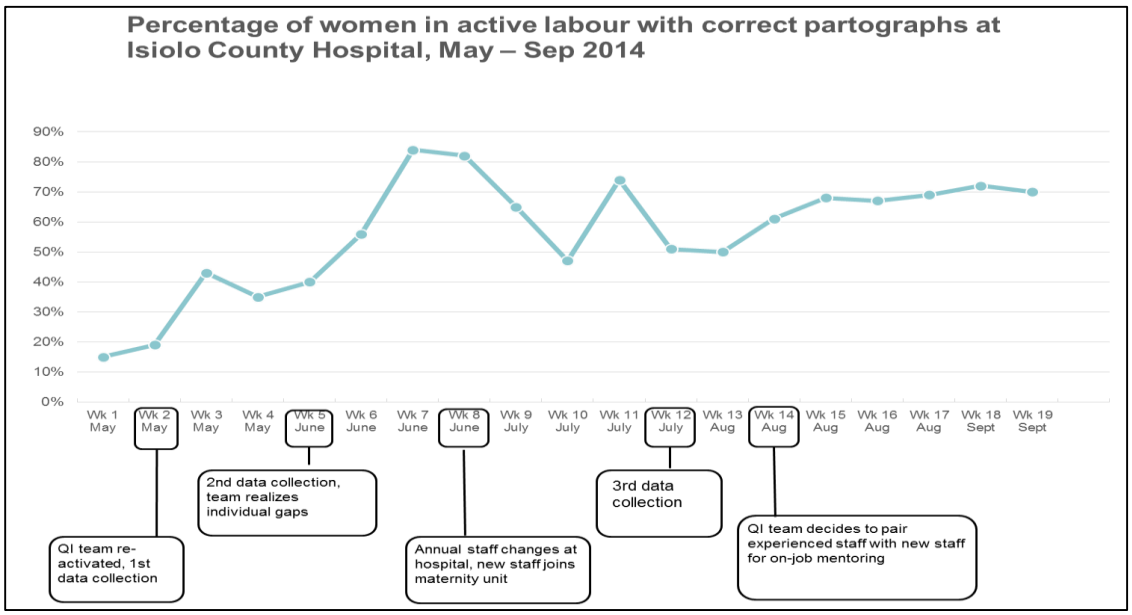
APHIA plus Imarisha

- APHIA plus Imarisha selected some high-volume facilities from the counties they support, and ASSIST supported and trained select staff from those facilities (Q4). APHIA plus Imarisha technical teams worked with the facilities to collect baseline data from Isiolo County and are using the data to determine where to focus improvement.

RESULTS

Isiolo County Hospital is one of the facilities that was supported in QI since 2013. They looked at the performance indicators that were performing below national expectations. One of the indicators the facility was following was on correct filling of partographs during delivery. A number of change ideas were introduced, key among them paring of experienced staff with those who were new (Figure 22).

Figure 22: Kenya: Percentage of women in active labor with correct partographs at Isiolo County Hospital (May-Sept 2014)



Activity 6. Malaria

KEY ACCOMPLISHMENTS

- **ASSIST identified and engaged a consultant to help drive the malaria QI work in the three counties that were identified as high-burden counties and work with the national mechanism** (Q3). Together with the malaria unit in the MOH, ASSIST developed a work plan that will guide the malaria QI consultancy and implementation cycle. The objectives of the malaria QI work are to improve supply chains of malaria diagnostics and antimalarial drugs from county level to facility level, streamline stakeholders' support to the county, and improve case diagnosis and management at facility level.
- **ASSIST supported the first county malaria QI orientation workshop in Busia County** (June 2014). During the meeting, the county and facilities presented their baseline performance on malaria case management and stock status over the last one year. ASSIST oriented two of the three county health management teams on QI, trained them, and helped them form work improvement teams who are pushing the QI agenda (Q4).

SUSTAINABILITY AND INSTITUTIONALIZATION

All of 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 (NACSOP, Family Health, Primary Health and Directorate of Health Standards, and Quality Assurance and Regulations) 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. The project's work this year with the MOH Directorate of Health Standards, Quality Assurance and Regulations to develop a national health QI policy is a significant step towards institutionalization of QI in the health sector.

While much of the OVC improvement work involves USAID service delivery partners and community-based organizations, the activities support the implementation of the MLSS&S-approved national OVC standards, the new national social protection policy, and the application new psychosocial support guidance. The engagement of county coordinators for children services in the improvement work is also helping to mainstream QI in child services.

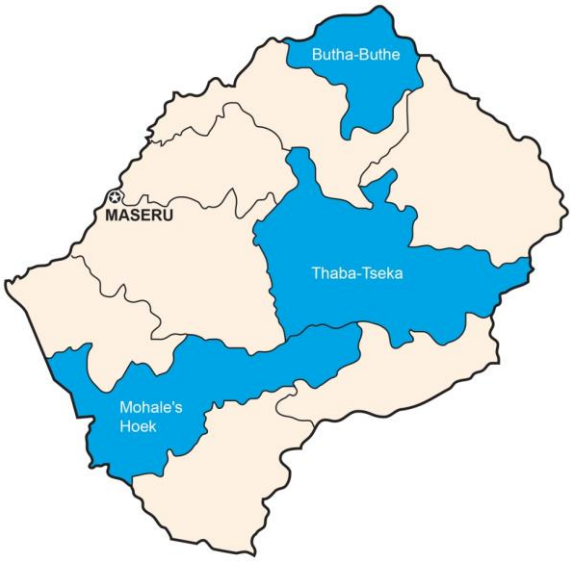
LESOTHO

BACKGROUND

USAID ASSIST began working in Lesotho in November 2013. The project is supporting the Ministry of Health and other partners for the implementation of the Partnership for HIV-Free Survival (PHFS). USAID ASSIST has also been asked to work with the MOH and partners on applying a uniform quality improvement approach across all programs consistent with the new PEPFAR Quality Strategy.

In FY14 ASSIST faced major challenges working in Lesotho. The two main reasons for this were the moratorium placed on travel to the districts by the MOH Director General of Health Services(so that the ministry's new reform program could be planned) and the ongoing instability of the political climate.

Scale of USAID ASSIST's Work in Lesotho



HIV/AIDS (including OVC)

MOH, 3 Implementing Partners

12 facilities

3 out of 10 districts

3 Quality Improvement Teams

PROGRAM OVERVIEW

Activities	What are we trying to accomplish?	At what scale?	Improvement Activity	Activity
1. Quality improvement technical assistance for the PHFS	• Reduce HIV transmission to exposed infants and reduce infant mortality by ensuring care is provided in line with 2010 WHO PMTCT guidelines • Improve retention of mother-baby pairs • Improve data quality (completeness and accuracy) • Improve delivery of standard services during routine visit for mother-baby pairs	3 districts: Thaba Tseka, Mohale's Hoek, and Butha Buthe	x	
2. QI strategy and capacity building for all HIV and AIDS activities to include ANC, MNCH, ART, and HIV testing and counselling (HTC)	• Develop a uniform QI approach across all programs including structure and functional capability	National		x

Activity 1. Quality improvement technical assistance for the PHFS

KEY ACCOMPLISHMENTS

- **Conducted first learning session** (November 25-26, 2013): Participants included: Head of Quality Assurance Unit (QUA) of the MOH, USAID representative, and CDC representative (nutrition counselling and support focal person); district coaches from all three demonstration districts; site representatives from all 12 demonstration sites; Elizabeth Glaser Pediatric AIDS Foundation (EGPAF), and national and district staff. Focus areas for improvement in Lesotho were agreed upon. These are presented in Table 4 below.

Table 4: Lesotho: Focus areas for improvement

Focus areas	Components
Data quality	• Data completeness • Data accuracy
Retention of mother-baby pairs	• Baby received any service in under 5 register in month of interest • Mother received ART in month of interest
Routine visits	• Infant and young child feeding counselling • Nutrition assessment for the baby • Nutrition assessment for the mother • Vital signs for the mother and baby • Prophylaxis (NVP) / Cotrimoxazole prophylaxis for the baby depending on age • ARVs for the mother • Counselling on adherence • Screening for opportunistic infections and TB • Give appointment for the next visit • Update the data tools
6 week visit	• DNA/PCR for the baby • Exclusive breastfeeding • Immunization
10 week visit	• Immunization
14 week visit	• 2nd DNA/PCR for the baby • Immunization
6 month visit	• Complementary feeding • Vitamin A supplementation
9 month visit	• Rapid test • Immunization
13.5 month visit	• Post breast feeding dried blood spot testing
18 month visit	• Vitamin A supplementation • Albendazole
Malnourished mother/baby	• Treat malnutrition
Mothers with unknown/HIV negative status	• Test for HIV • Enroll in care if positive
ART naïve positive mothers	• Provider-initiated testing and counselling • Initiate ART
HIV-positive baby	• Enroll on ART • Start presumptive treatment if suspect

- **Conducted coaches' meeting** (November 27, 2013). The meeting included national coaches from EGPAF, MOH QAU and NACS coordinators in addition to district coaches from the three demonstration districts (Mohale's Hoek, Butha-Buthe, and Thaba Tseka). The outputs of the meeting included terms of reference for coaching visit 1, a revised coaching guide, and a copy of ASSIST multi-facility database to be used by coaches.

- **Undertook quarterly coaching visits to each of the three PHFS pilot districts** (Q1-4). ASSIST has undertaken coaching visits to 12 facilities in 3 districts (Thaba Tseka, Butha Buthe, and Mohale's Hoek).These visits were undertaken in order to update the status of the program given that the last visit had been when the baseline assessment was conducted in April 2014.
- **Discussed initial planning with the MOH to integrate PHFS activities into overall PMTCT program** (Q2)**.**
- **Collected PHFS baseline performance data (Q2) and presented and discussed the initial findings with the MOH** (Q3).
- **Reviewed the national PHFS plan and made recommendations to the MOH** (Q3).

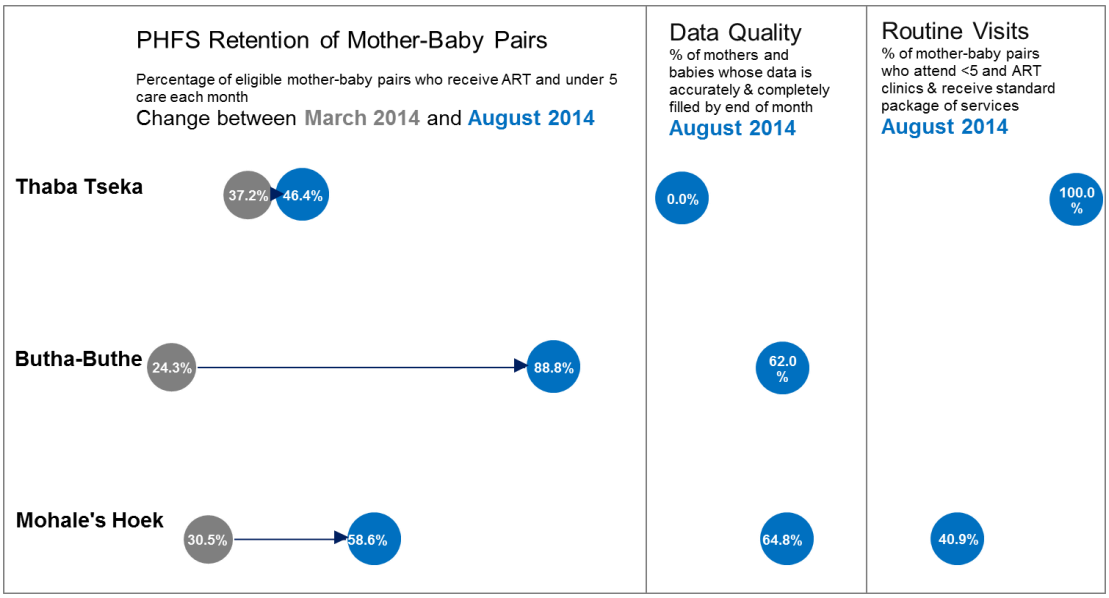
RESULTS

Improvement in Key Indicators

Activity	Indicators	Baseline (September 2013)	Last value (August 2014)
PHFS Retention of mother-baby pairs	% of eligible mother-baby pairs who receive ART and under 5 care each month	32.7% (12 sites)	64.6% (11 sites)
Data Quality	% of mothers and babies whose data are accurately and completely filled by the end of the month	No Data Available	42.3% (11 sites)
Routine Visits	% of mother-baby pairs who attend under 5 and ART clinics and receive the standard package of services	No Data Available	70.5% (11 sites)

- Figure 23 shows improvements achieved by district in retention of mother-baby pairs, data quality, and the proportion of mother-baby pairs receiving the standard package of services at their last visit.

Figure 23: Lesotho: Results of retention of mother-baby pairs (March 2014 - Aug 2014)



Activity 2. QI strategy and capacity building for all HIV and AIDS activities to include ANC, MNCH, ART, and HTC

KEY ACCOMPLISHMENTS

- Completed Country Operation Plan for 2014/2015 (Q2).

- Met with the Director of the Disease Control Division to discuss the introduction of the QI approach into the national HIV and AIDS Program (Aug 6, 2014). A meeting is pending with all managers in the program as well as the district HIV and AIDS focal points.
- Managed to overcome the restrictions placed on all programmes due to the political strife and undertook a quarterly coaching visit.

SUSTAINABILITY AND INSTITUTIONALIZATION

Through the interventions of ASSIST, the heads of both the National PMTCT Program and the Quality Assurance Unit, have agreed to assume leadership responsibility over the PHFS program. The program is now (correctly) being led by the PMTCT Program Manager. This bodes well for both the sustainability of the program as well as for the institutionalization thereof.

MALAWI

BACKGROUND

In FY12-13, the Ministry of Gender, Children, and Social Welfare (MOGCSW) approved national standards for orphans and vulnerable children (OVC) care and recommended a wider implementation of the standards using quality improvement approaches. In FY14, ASSIST supported five community teams in Balaka and Mangochi districts to identify and address some critical barriers in accessing various services for vulnerable children. The five communities conducted Child Status Index (CSI) assessments and identified education performance among vulnerable children as a critical area that needed to be addressed in their communities. On a quarterly basis, the five communities came together to share lessons experiences and challenges encountered while trying to improve academic education performance among vulnerable children in primary schools.

Scale of USAID ASSIST's Work in Malawi

MOGCSW

72 Communities

5 Quality Improvement Teams

PROGRAM OVERVIEW

Activities	What are we trying to accomplish?	At what scale?	Improvement Activity	Activity
1. Improve quality of care and protection services for vulnerable children and their families	• Identify and address critical barriers in the scale up and sustaining of effective high-impact interventions provided to vulnerable children and their families	2/28 districts in southern region of Malawi 72 villages 5 QI teams (3 in Mangochi and 2 in Balaka districts)	x	
	• Improve the quality of OVC services and care through distribution of national service standards and support for the creation of improvement teams	Distribution of standards to 28 districts through 3 regional meetings in North, South, and Central		x

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

KEY ACCOMPLISHMENTS

- **Conducted a QI training for district and community social service providers.** Conducted a QI training for five districts implementing the OVC standards (November 2013). A total of 60 participants attended, including: District Social Welfare Officers, Social Welfare Officers, Community Child Protection Officers, Community Based Organizations' Directors and Field Officers. After the training, the coaches set up QI teams in the communities who are meeting bi-weekly.
- **Established two QI teams in surrounding villages in mid-December 2013.** After the QI training, coaches in Balaka District conducted meetings in the surrounding 27 villages with support from the Community Child Protection Workers from the area. The coaches facilitated the establishment of two QI teams in the area.
- **Conducted CSI assessments for OVC in January 2014.** The newly formulated QI teams reviewed existing OVC registers and updated them before sampling a quarter of the vulnerable children from surrounding 27 villages in the two Traditional Authorities. The team oriented the volunteers and members of the QI teams on the use of the CSI form and how to conduct the assessments. The teams assessed 180 vulnerable children from the existing OVC registers.
- **Conducted fish bone analyses for the priority problems identified.** The QI teams identified the following factors as contributing to the poor performance of the children in the catchment area.
    - Staffing: Limited numbers of primary school teachers in the surrounding schools; minimal supervision of teachers; and poor housing for teachers in the area.
    - Absenteeism: Lack of parental guidance; lack of role models; lack of scholastic materials; and peer pressure to miss classes.
    - Cultural: Child labor; cultural practices interfering with school calendars.
    - Infrastructure: Inadequate school blocks leading to overcrowding in classes; inadequate latrines in the primary schools to cater for large numbers of children.
- **Conducted bi-monthly quality improvement coaching visits to five QI teams in two districts.**
    - ASSIST, in collaboration with the MOGCSW, conducted coaching visits to the five QI teams in Mangochi and Balaka districts. This was done to follow up progress on the following: CSI assessments, problems analysis, developing improvement aims, indicators, changes to be tested, and organization of data on results.

- The five QI teams have registered a total of 3,280 vulnerable children, and out of these, 790 (24%) vulnerable children were randomly selected and assessed on all six CSI domains (food security, nutrition, shelter, care, abuse, legal protection, wellness, health care, emotional, social educational performance and education and work). After the assessments, the teams compiled the results using a simple template to summarize all the scores.
- Using the CSI summary table, each QI team isolated and identified two domains that were poorly rated by volunteers during child assessments. The teams then developed improvement aims for the poorly rated domains. The teams also outlined changes to be tested guided by the OVC national standards.

Chingwenya QI Team:

- **Chingwenya QI started supporting Chingwenya Msanga, Chilore and Masongola primary schools** (January 2014). After assessing a sample of 132 children, 70% showed poor scores on education performance. As a result, Chingwenya prioritized to work on improving education performance in four primary schools in their catchment area. After starting supporting the schools, all the four schools have registered improvements in the three terms they have been supported. Some of the changes the schools tested to improve the education performance for children included:
  - Ensuring monthly assessments are done in each of their targeted primary schools.
  - Using female role models to encourage girl children to attend classes regularly and remain in school. Primary school female teachers were therefore selected to encourage girls on a monthly basis in an effort to improve their performance, daily attendance of classes, and interest towards school.
  - Monitoring daily attendance and performance of girl children in collaboration with community mother groups. The mother groups are linked to the targeted primary schools. The volunteer mothers counsel OVC guardians on the economic benefits of education, importance of providing time for children to study at home, and advising them on harmful cultural norms that sometimes interfere with the good academic performance of children.
  - Intensifying community sensitization on the importance of attaining education through connecting with other stakeholders working on children's issues in the area, such as Campaign for Girls Education (CAMFED), Youth Net and Counseling (YONECO), National Initiative on Civic Education (NICE), Community Victim Support Units, local leaders, and Community Child protection workers from the surrounding areas.
  - Lobbying the Primary Education Advisor to increase teaching staff in the targeted four primary schools.
- **Chingwenya QI team also identified that there were some gender disparities in performance in various grades** due to reasons such as: irregular school attendance, being given domestic chores/work to do during school hours, poor preparation for exams, and child marriage proposals affect the concentration of the children in school. To curb the poor attendance of girls in school, Msanga primary school intensified linkages with volunteer mother groups to follow up girl children in communities to make sure the girls were attending school regularly.
- **The QI team also discovered that the school had limited teachers' guides to support teachers in their lessons.** The QI team linked with the District Education Managers Office who indicated that the teachers' guides were not available in the district to distribute to teachers but a copy was given for the team to make copies instead. The QI team worked with the school management committee and parents with children in the school to contribute an equivalent of 50 cents to raise money for photocopying. Fortunately the school raised an equivalent of $27 to photocopy the teaching guides. The teaching guides were shared with the Open Distance Learning (ODL) teachers at the school for their reference to lessons to standardize the quality of teaching at the school.

Toleza QI team

- **The Toleza QI team in Balaka District also discovered that most vulnerable children in their nine villages were also facing challenges in educational performance**. The Toleza QI team

registered 338 vulnerable children out of which 83 (25%) (76 boys and 56 girls) were assessed. The team decided to compile some recent test results in Toleza Primary school.

- The QI team discovered that there was a gender disparity in the performance among girls and boys. Most girls passed in the lower classes such as standard 1, 2, and 5 while boys did well in standard 3, 4, 6, and 7. The team conducted their root-cause analysis and learned that the girls in standard 3 and 4 were sometimes disturbed with traditional cultural practices which led to absences from school for 3-4 weeks.
- The following were some of the changes that were suggested by the teams in Toleza and Chingwenya to be tested in the area.
  - Link with District Educational Manager to increase performance in primary schools by redistributing teachers in schools with inadequate numbers of teachers
  - Identify role models to motivate girl children in standard 3,4, 6, 7 and 8 to work harder to excel in their primary education
  - Introduce math clubs, quizzes, spelling bees, debates, and Best Performance Incentives in schools to encourage children to perform well in their classes
  - Conduct regular inspection of video show rooms with the child protection committees to identify truants in primary schools
  - Conduct counselling and guidance sessions for non-performing pupils to improve how they perform in school
- Apart from education performance, the team in Toleza also discovered from their CSI summary data that psychosocial wellbeing of children in the area was also a problem. As a result the team developed a specific improvement aim to improve access to psychosocial support activities in the surrounding villages. Only 9% of children accessing a newly established community children center indicated that they have someone that shows them love and affection.

- **Changes to test to improve psychosocial wellbeing:**
  - Establish four children's corner centers in Toleza catchment area to target 9 villages
  - Conduct experiential learning games and play activities during the children's corner sessions each weekend
  - Undertake home visits for children in need of counselling and follow-up
  - Identify and refer children with psychosocial issues to the District Social Welfare Office, especially cases that communities cannot appropriately manage
  - Conduct life skills training for children in children's corner centers
  - Orient caregivers in Early Childhood Centers and children's corner centers in psychosocial support topics such as counselling and general management of centers
  - Diversify the types of food stored in strategic food reserves at community level
  - Career talks for the two targeted primary schools of Toleza and Kabango to encourage children to work harder in their studies involving local role models from the community
  - Counseling and guidance sessions for children with academic performance challenges in collaboration with the mother group representatives
  - Lobbying the District Education Managers Office through the Primary Education Advisor to allocate additional teachers to the two primary schools (.)
- The team has recorded improvements in Toleza primary school and noted that Kabango Primary school needs more support. Following the lobbying, four more primary school teachers were deployed to the schools to curb the challenges of the high pupil-teacher ratios for the schools.

<u>Chanthunya QI Team</u>

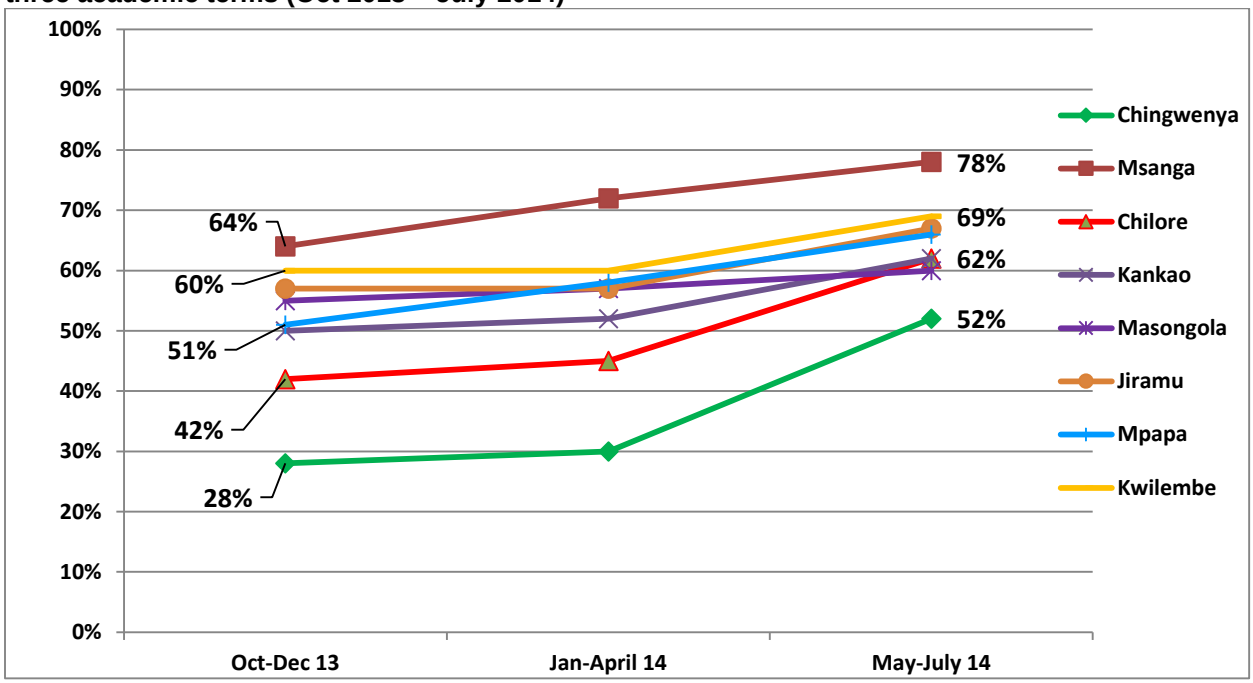
- The QI team developed the following improvement aim to work on this fiscal year: Within 12 months Chanthunya QI team will improve food security in vulnerable households from 31.6% to 50% through sensitizing families on modern farming methods and economic activities in Thamanda and Phingo villages in Traditional Authority Chanthunya in Balaka District.

- Only 32% of OVC households that were interviewed were food secure in the 19 villages in Chanthunya catchment area. After analyzing the food security service area using fish bone diagrams, the team agreed to test the following changes guided by the OVC national standards:
  - Conduct community awareness activities on modern agricultural methods and livestock production
  - Encourage community members, especially vulnerable households, to improve household structures in all the villages for the safety, sanitation, and general protection of children
  - Strengthen farmers clubs in the villages
  - Promote kitchen gardens at household level, especially in vulnerable households
  - Promote formation of Village Savings and Loan groups
- **Conducted a learning session for five QI Teams:** In collaboration with the Ministry of Gender, Children and Social Welfare, ASSIST conducted a learning session on March 26-28, 2014 for representatives from the five QI teams from Balaka and Mangochi districts. Thirty-two participants attended the learning session to discuss the following: Share progress in the improvement plans; how to use OVC national standards to develop changes for testing; review the process of testing changes using PDSA cycles; and document results of changes being tested in all service areas.
- **Gender disparities were analyzed in in performance in classes at Msanga Primary school:** The Msanga quality improvement team identified that most girls who fail exams in classes (i.e., standards 2, 3, 5, 6 and 7) do not attend classes regularly and are given other domestic chores to do. As a result, they do not prepare for exams or do not even take all of them. Hence their scores are lower than those of boys, and they fail.
- **Conducted District Executive Committees briefing meetings on piloting the OVC standards.** In May 2014 the project supported the Ministry to conduct three District Executive Committee briefings on the OVC standards, how the standards were implemented, and results accomplished by the piloting districts. Approximately 150 District Executive Committee members were briefed in three districts.

RESULTS

- **Improved the percentage of vulnerable children (aged 6-17 years) enrolled and passing term assessments in primary schools in Balaka and Mangochi districts** through engaging children, families and communities. The five community quality improvement teams worked with 14 primary schools in two districts. They tested a number of changes to try and improve education performance for children. A total of 8 out of 14 (57%) primary schools have registered improvement in three academic terms.
- Figure 24 shows increase in pass rates children in eight of 14 primary schools among grades 1-8 (five primary schools); grades 1-7 (two primary schools); and grades 1-5 (one primary school). In some schools, for example Chingwenya, the overall performance of children has increased from 28% to 52% due to the changes the teams have been testing at the school in collaboration with the school management committees and teachers. Six out of the 14 schools showed some improvements in either one or two terms only, and this is why they were not included in Figure 24.

Figure 24: Malawi: Percent increase in pass rates for eight out of fourteen primary schools in three academic terms (Oct 2013 – July 2014)



Figures 25-27 show the results from community efforts to improve the pass rates of boys and girls in standard 4 and 5 at Kankao primary school in Balaka District. Changes that were tested included having the math clubs; and children being taught in groups to help each other for subjects like math. The headmaster, after being briefed of what the QI team was trying to achieve in the school, was also interested and motivated to supervise and mentor teachers for these two classes to improve their educational performance. In addition, the girl children were being tracked by mother groups to ensure they were regularly attending classes in communities.

Figure 25: Malawi: Sex-disaggregated pass rates for standard 4 in three academic terms at Kankao primary school

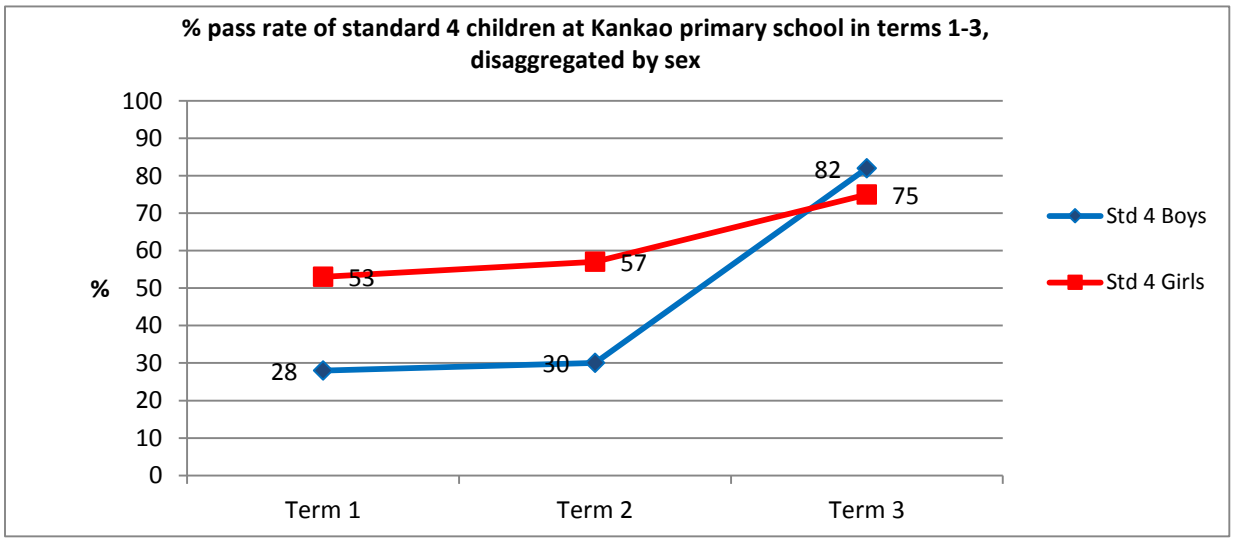


Figure 26: Malawi: Sex-disaggregated pass rates for standard 5 in three academic terms at Kankao primary school

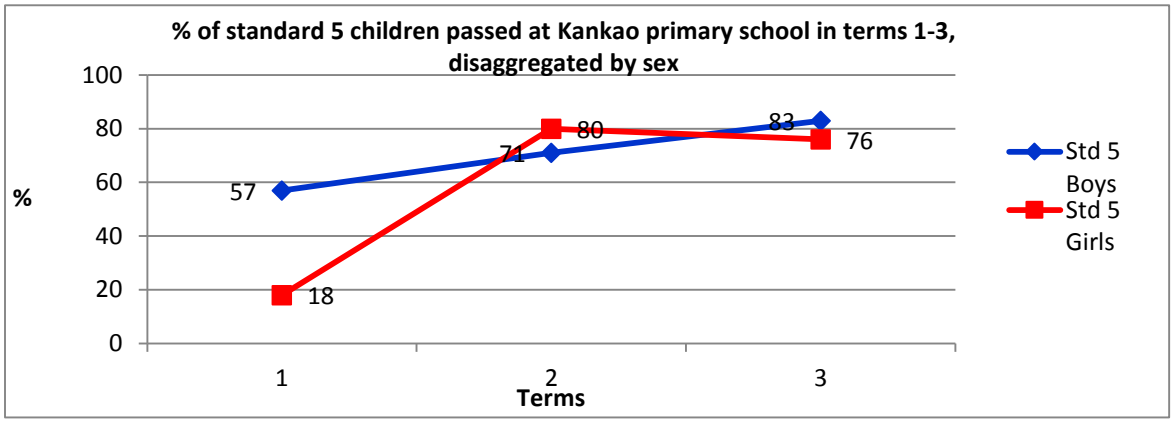
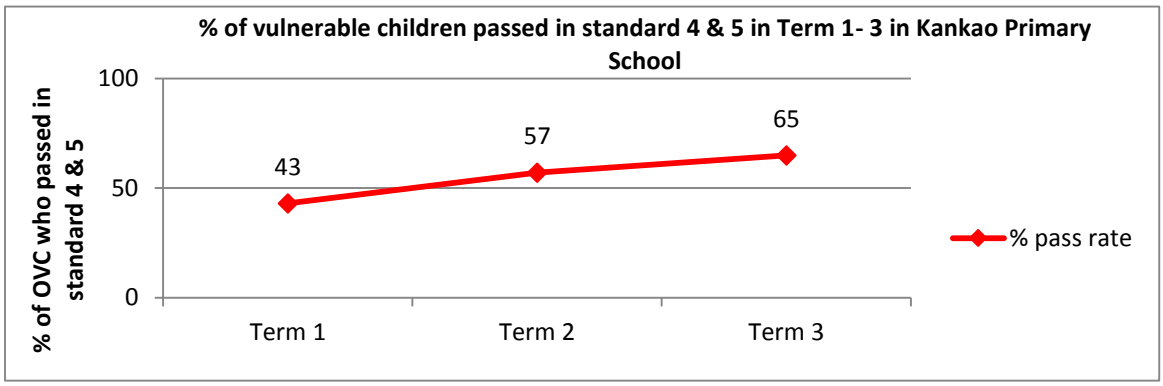


Figure 27: Malawi: Pass rates among vulnerable children in standard 4 and 5 at Kankao primary school in terms 1-3



SUSTAINABILITY AND INSTITUTIONALIZATION

USAID ASSIST supported the MOGCSW to train four District Social Welfare Officers, two Ministry of Education, two Ministry of Agriculture, and two Ministry of Health extension and district officers to build their capacity at community and districts levels to manage and sustain improvement work in the targeted sites. Through the MOGCSW, efforts were made to include the use of the OVC minimum standards and quality improvement in the national plan of action to integrate quality service provision at all levels working with vulnerable children.

MALI

BACKGROUND

Given the still significant unmet need in Mali for adequate coverage and quality of maternal and newborn health services along with the stated interest of the Ministry of Health and USAID in strengthening maternal and newborn services, ASSIST worked in Mali in FY14 to strengthen and expand activities, both in technical content and coverage, that were carried out through HCI in previous years.

Scale of USAID ASSIST's Work in Mali

Family Planning/POP

Maternal and Child Health

MOHSW, 1 Implementing Partner

153 facilities

50 communities

203 Quality Improvement Teams

2,265,662 out of 2,926,043

PROGRAM OVERVIEW

Activities	What are we trying to accomplish?	At what scale?	Improvement Activity	Activity
1. Improvement of EONC at facility and community levels	• Improve evidence based maternal and newborn care and post-partum family planning services at facility and community levels in target districts in the Kayes Region	1 region (1/7), 153 facilities (153/164) in 6 districts (6/7) for 1 858 351 inhabitants (out of 2,375,000) Facilities: peripheral facilities (146), district hospitals (6) and the regional hospital (1) Target districts in Kayes Region: Bafoulabé, Diema, Kayes, Nioro, Kenieba and Yelimané QI teams: 153 Communities: 26 (Community Health Agents and volunteers)	x	
2. Improvement of anemia prevention and control activities	• Improve delivery of evidence based interventions to reduce anemia among pregnant women and infants at facility and community levels in Bougouni districts (Sikasso Region)	This intervention will target 1 region - Sikasso (1/9), 25 facilities (25/37) in 1 Bougouni District (1/9) for 407 311 inhabitants (out of 551 043) Type of target facilities include peripheral facilities (24) and district hospital (1) QI teams: 25 Communities 24 (Community health committees)	x	

Activity 1. Improvement of EONC at facility and community levels

KEY ACCOMPLISHMENTS

- **Engaged in capacity building of trainers, coaches and providers throughout FY14.**
  - Conducted trainings on "Helping Babies Breathe" (HBB) for providers during the first and second quarters of FY14. During the first half of FY14, 155 providers including 100 women were trained on newborn resuscitation or HBB from two districts (Kayes and Yelimané) and the regional hospital. Trainers were from ASSIST headquarters, ASSIST Mali, MOH and the Regional Directorate. The training focused on simple techniques like keeping the baby warm, rubbing the baby dry, and if necessary, suctioning the baby's mouth and correct application of a resuscitator for face mask ventilation. These simple skills can prevent up to 80% of deaths due to newborn birth asphyxia. HBB training was integrated into essential newborn care (ENC) and AMTSL training,) as all occurred at the same time. The QI portion of the discussions focused on analyzing major obstacles in applying these standards at all levels of the health system in Mali, from the operational to the management levels. Also, priority improvement aims, indicators, and initial changes that can be tested to address these challenges and improve care to all newborns in need of HBB were discussed. The most challenging part was how to document essential tasks performed and actions taken mostly during the first minute of life on existing HIS registers and other forms. Participants analyzed all existing registers, forms, and partograms and decided to test ideas on how to improve them and have key tasks recorded in appropriate registers and partograms.
  - Provided refresher training on post-partum family planning (PPFP) for 184 providers and coaches, including 177 women, of Diéma, Kayes, Nioro and Yélimané districts (Q2).
  - Refreshed 43 providers and coaches from Kayes, Diéma and Yélimané districts on screening and management for PE/E (Q2).
  - Conducted training of trainers session on improved antenatal care (ANC) package to develop improvement objectives, indicators, monitoring plan, and tools in preparation for the integration of this package into ANC QI activities in 3 districts (Kayes, Diema, Yelimane) (June 2014).
  - Conducted a training of providers (4 sessions) on improved ANC package to facilitate the implementation of the package in Diema and Yelimane (July 2014). Two hundred providers were trained on this package (17 medical doctors, 15 midwives, 32 obstetrical nurses, 43 nurses/TSS and 93 matrons).
- **Conducted coaching visits.**
  - ASSIST carried out a coaching visit to all EONC extension sites in three target districts of Nioro, Bafoulabé, and Yélimané (Kayes Region) (Q1). The main purpose was to document which recommended changes were implemented and what results were obtained. In addition, follow up/coaching visits were performed to all newly trained providers on HBB (Q1). Results were very encouraging, as providers started applying new skills and also testing some changes.
  - The team held a coaching visit for the community QI teams in Diéma (Q2)**.** The team observed that 29 of the 35 CHWs had mastered the content of messages to women and their husbands. In Farabougou village, all pregnancies were detected in the first quarter.
  - Conducted coaching in all 153 health facilities and 26 communities in 5 districts of Kayes Region (April and June 2014). QI teams were set up and began to meet on a weekly basis to discuss QI implementation. As a result, some improvements were observed in the set-up of community contributions (*caisse communautaire*) to support transportation fees for women who did not have access to these services. The performance of QI teams also improved by better planning and greater local problem-solving.
  - Conducted seven coaching visits in all 153 health facilities in 5 districts in Kayes Region (July 2014). Providers (106) were observed during the coaching visits. As a result, some improvements were observed with 90% maintenance of performance and compliance to the norms for provision of AMTSL, ENC and HBB.
  - Conducted a regional meeting for coaches (July 2014). Seventeen (17) medical doctors and 20 midwives participated in this meeting. As a result, coaches recommended to set up a

regular timeframe for this type of learning process in order to continue to share lessons learned and find solutions for challenges and difficulties.

  - ASSIST staff and district coaches conducted a coaching visit to accessible peripheral health centers in Yelimane, Nioro and Diema (August 2014).
  - Conducted a coaching visit to community QI teams in Diema with coaches from peripheral health centers (August 2014).
  - Regional and national coaches conducted two coaching visits to all referral health facilities (September 2014). As a result, some improvements were noted in terms of compliance with HBB implementation standards as well as use of tools to collect data.
- **Facilitated learning sessions to share experiences and best practices.**
  - Held the second community learning session in two communes of Diéma with 112 participants, including 31 women and 21 village heads (Q1)**.** The topic was prenatal care at the community level. The intervention focused on prenatal care, including home visits and qualified personnel visits.
  - Conducted the first learning session for the 40 sites in the two districts (Kayes and Yelimane) implementing HBB QI activities (June 2014). Two parallel sessions were organized with 72 participants attending, including representatives of the Regional Direction of Health and ASSIST Mali technical advisors as facilitators of the sessions.
  - Conducted a learning session for the 22 sites implementing PE/E and PPFP in Diéma district (June 2014). As a result, some improvements have been observed in the initiation of new changes. These include engaging the management committees of two of the 22 community health centers to support fees for ANC for women who did not have access to services due to financial barriers and procurement of kits for systematic checking of PE/E.
- **Held workshop to validate HBB monitoring indicators** and determine how to document essential tasks performed and actions taken during the “golden minute”, using existing HIS registers and other forms (Q2). It was decided to use a stamp for documentation on partograms. In addition, data collection tools were developed and distributed to coaches.

RESULTS

Improvement in Key Indicators

Activity	Indicator	Baseline (Nov 2009)	Last value (August 2014)
Improvement of EONC at facility level in Kayes Region	Compliance with 3 key AMTSL norms	0% 17 sites	99% 144 sites
	PPH rate	1.2% 17 sites	0.18% 144 sites
	Compliance with ENC norms	39% 17 sites	99% 144 sites
	Compliance with PE/E diagnostic standards	25% 17 sites	90% 33 sites
	Compliance with PE/E treatment standards	0% 17 sites	85% 33 sites
Improvement of EONC at community level in Diema District (Kayes Region)	New pregnant women enrolled this quarter	0 10 sites	173 (July 2014) 20 sites
	Women who received at least 1 home visit	0 10 sites	310 (July 2014) 20 sites

  - Results for improving delivery of AMTSL and birth preparedness are shown in Figures 28 and 29, respectively. Figure 30 shows the postpartum hemorrhage rate of facility deliveries at demonstration versus spread sites.

- Figure 31 highlights results from the compliance of eclampsia treatment standards at 19 demonstration versus 17 spread sites in Kayes and Yelimane districts.
- The percentage of newborns resuscitated according to standards has sustained improvements since the beginning of the intervention in July 2013, as shown in Figure 32, which also lists the changes implemented that contributed to this improvement.

Figure 28: Mali: Percent compliance with AMTSL norms and postpartum hemorrhage rate at demonstration vs spread sites (Oct 2009 – Feb 2014)

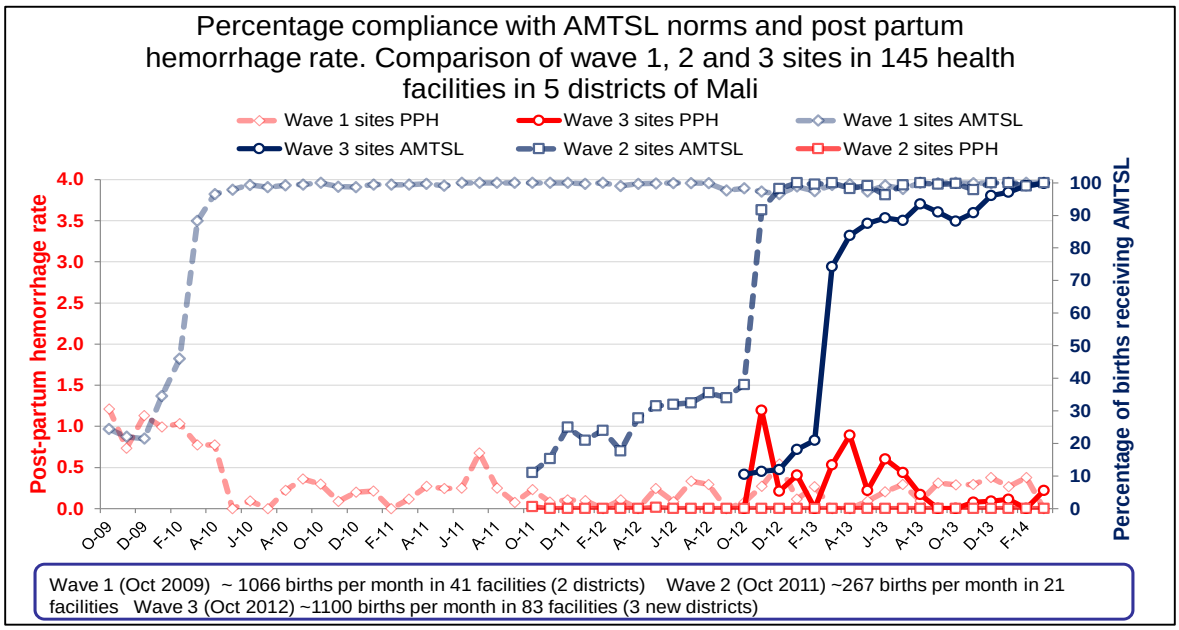


Figure 29: Mali: Birth preparedness of enrolled pregnant women at 13 community EONC sites, Diema district (Jan 2011 – March 2014)

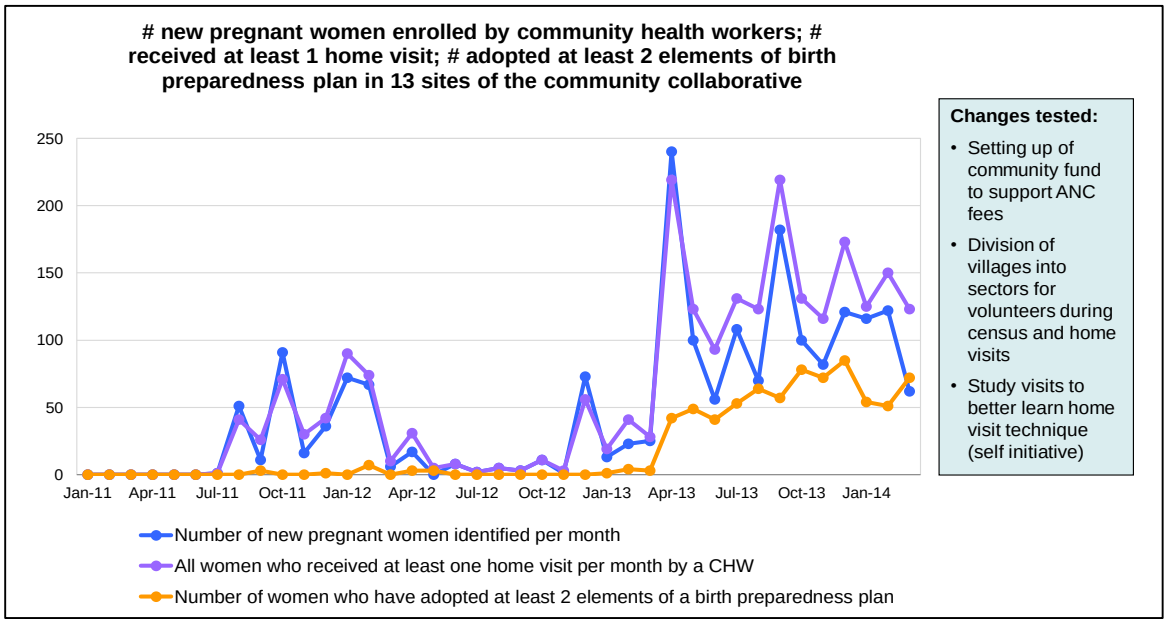


Figure 30: Mali: Postpartum hemorrhage rate of facility deliveries at demonstration vs. spread sites (Oct 2009 – June 2014)

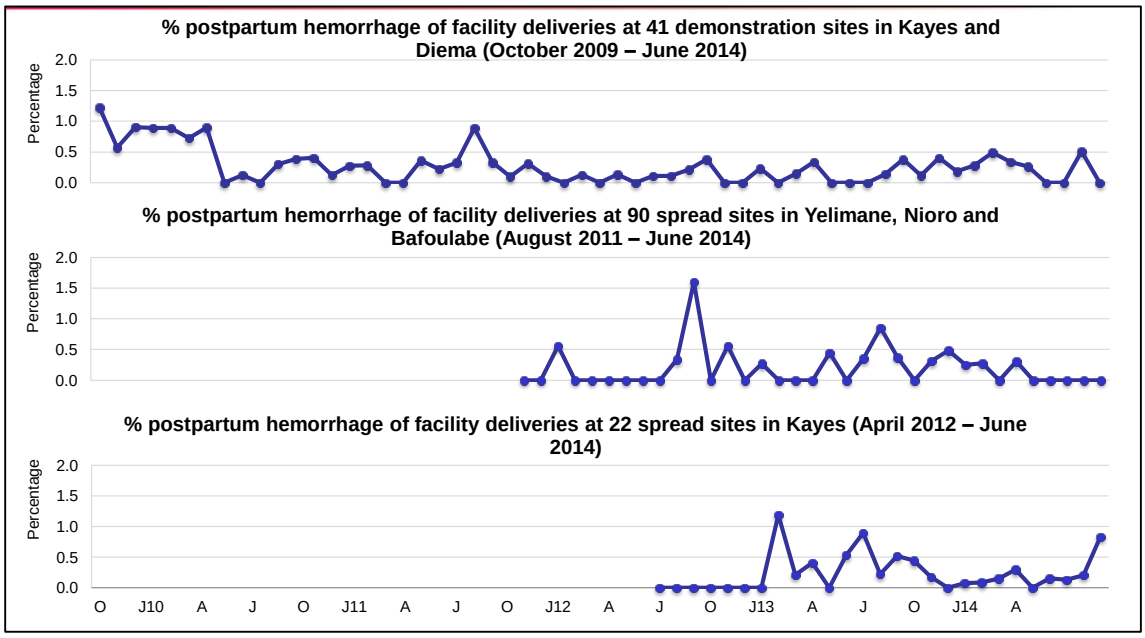


Figure 31: Mali: Compliance with eclampsia treatment standards at demonstration vs spread sites (December 2011 – March 2014)

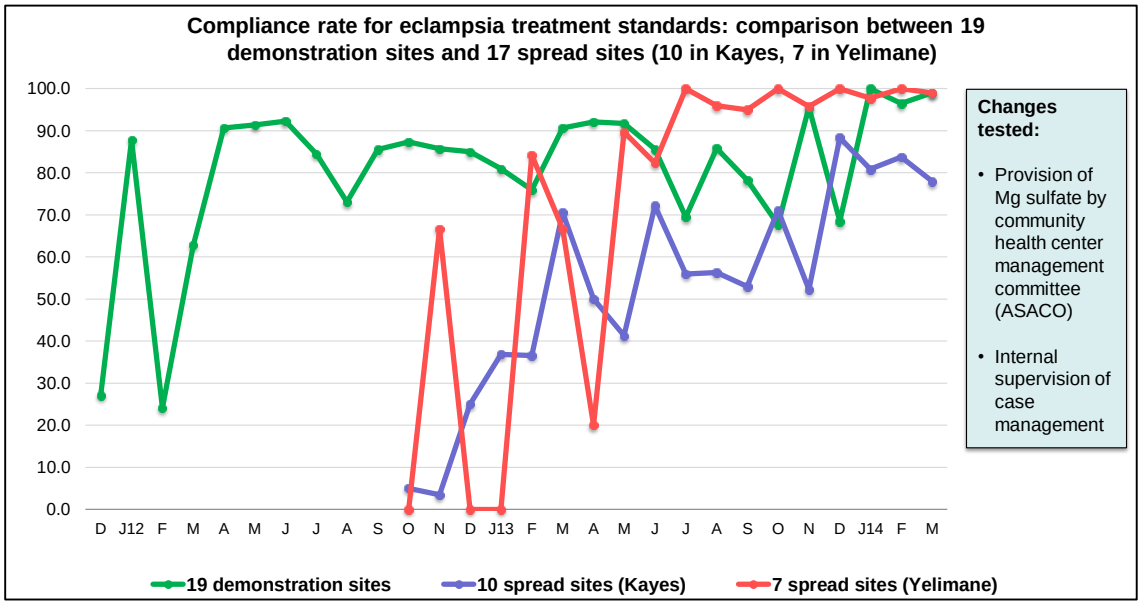
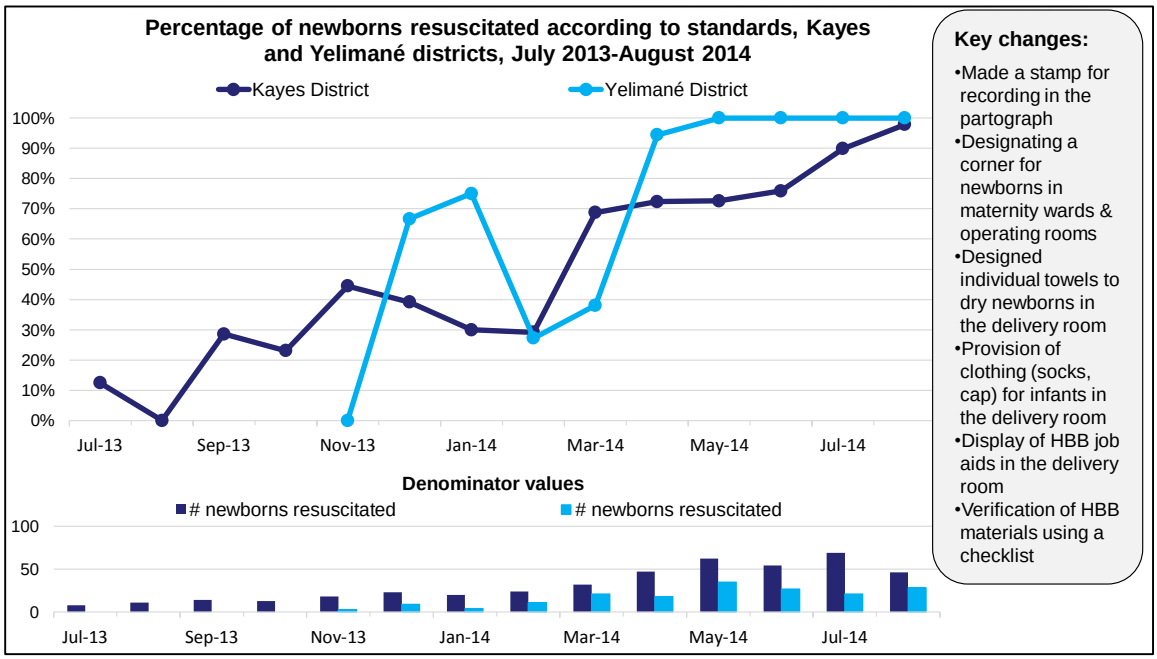


Figure 32: Mali: Percentage of newborns resuscitated according to standards (July 2013 – Aug 2014)



Activity 2. Improvement of anemia prevention and control activities

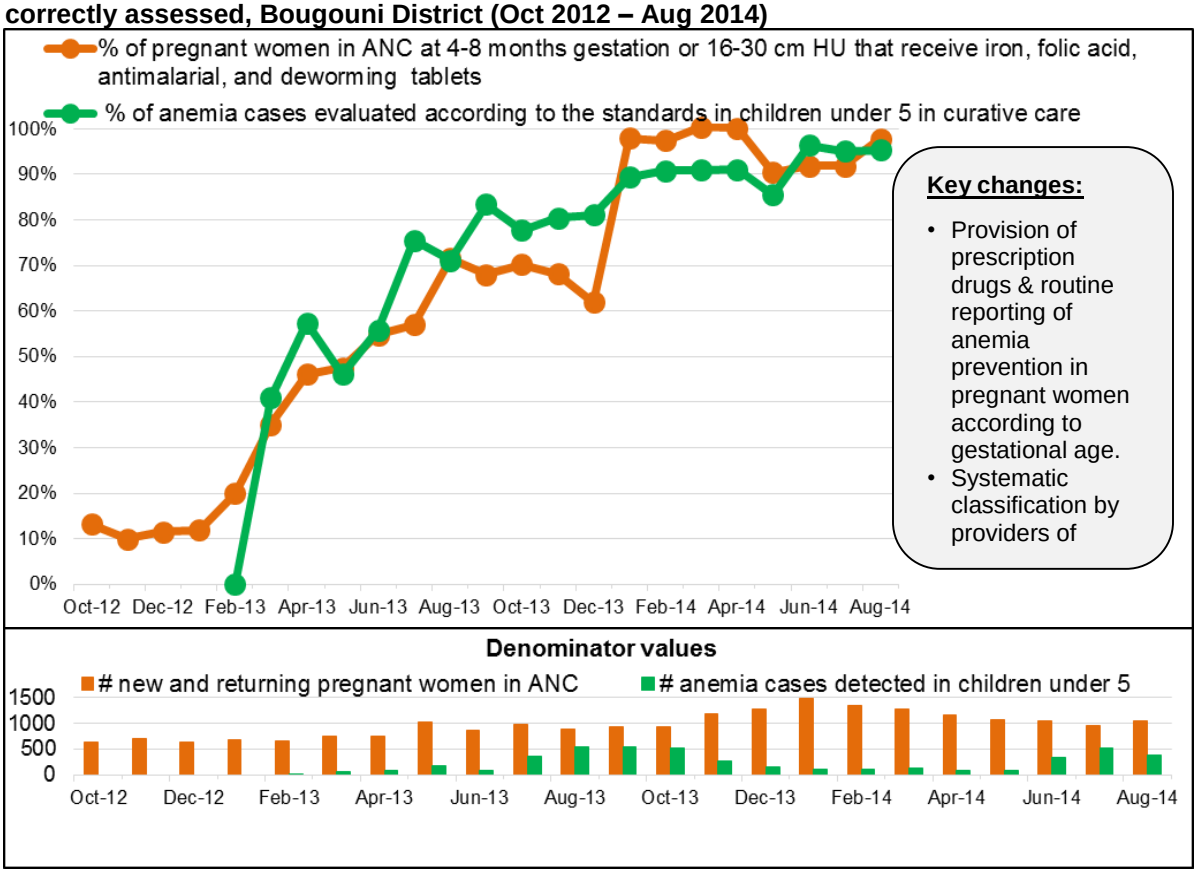
- **Introduced a community health system approach in Bougouni District through situational analysis and coaches training with the technical assistance from ASSIST HQ** (Q1). Fifty-six CHWs were subsequently oriented, including 24 women, on the community health system for the anemia program. Each target member returned to his/her community and identified formalized community groups in four health areas (Koumantou, Sanso, Sido, and Zantiébougou).
- **Data were collected on human resources performance and engagement in sites participating in the anemia collaborative in Bougouni.**
- **Twenty-four community groups were selected among 189 identified for the implementation of the community health system under the anemia collaborative.** Then, 249 members of community groups were trained on anemia and the community health system in the four target sites of anemia collaborative. They began data collection and received a first coaching visit.
- **Conducted coaching visits.**
  - Conducted the fourth coaching visit in all 25 sites implementing anemia QI activities (April-May 2014). Anemia screening has increased and became systematic in communities, and documentation of the management of anemia has improved at community health centers level (25/25 health centers).
  - Conducted coaching visits in all 25 sites implementing anemia QI activities (August – September 2014). We found that 10 QI teams implemented at 100% all improvements planned during past visits, four QI teams are in process, and 11 sites have not yet implemented activities. QI team meetings have been held monthly in 9/25 sites and every other month in 4/25 sites.
  - Conducted coaching visits to community committees in the four health areas (July – September 2014). These groups were able to identify 208 pregnant women within communities. Of these, 112 received counseling on anemia, and 107 accepted to visit the health center for their first ANC visit due to community committees' actions.
- **Facilitated learning sessions to share experiences and best practices.**
  - Held the second learning session in the second quarter to share experiences and best practices.

- Conducted the first learning session for the four sites in Bougouni District implementing community anemia improvement activities (April 2014). Four parallel sessions were organized. A total of 142 participants attended, including representatives of the District Health Team and ASSIST Mali technical advisors who together facilitated the sessions. The community health committees reported having identified 592 pregnant women; among those, 286 received their ANC at the community health center. The 306 women who did not go to the health cetner for ANC were targeted by the community committees for follow-up.
- Conducted third learning session for all 25 sites in Bougouni District implementing anemia QI activities (July 2014). Parallel facility and community sessions were organized with a total of 67 participants (35 women and 32 men), including 61 QI teams, two coaches and four representatives of the Association of Community Health Committees. ASSIST Mali technical advisors were facilitators of the sessions with technical support from the HQ advisor for community health. .
- Conducted a learning session with community groups from the four health areas (August 2014). One hundred and ten people (45 women and 61 men) participated in this session (72 members of community committees, 24 representatives of villages, 4 community health association members, 3 civil society organization members and 7 coaches).

RESULTS

- **Results of anemia management and prevention activities in Bougouni district are presented in** Figure 33, which highlights the percentage of pregnant women in ANC at 4-8 months who receive iron, folic acid, and other anemia prevention medication, and the percentage of anemia cases in children under five in curative care (October 2012-August 2014).

Figure 33: Mali: % pregnant women in ANC at 4-8 months gestation who received iron, folic acid, antimalarial, and deworming and % of anemia cases in children under who were correctly assessed, Bougouni District (Oct 2012 – Aug 2014)



SUSTAINABILITY AND INSTITUTIONALIZATION

In FY14, USAID ASSIST supported the MOH at regional levels to take steps to lead and implement quality improvement work focused on leading MNCH/FP challenges throughout the health system, in a participative process. The project has continued to build the capacity of regional and district coaches to fully implement planned improvement activities and document them within the existing system. All efforts this year were focused on gaining solid competencies in designing and implementing improvement work. To ensure sustainability, periodic meetings were organized under the leadership of coaches with other stakeholders to synthesize and disseminate lessons, discuss challenges, and plan for future actions. Learnings from district teams in both Kayes and Sikasso were shared with regional and national working groups in order to allow improvement strategies to become institutionalized.

MOZAMBIQUE

BACKGROUND

Starting in June 2013, the USAID ASSIST Project began providing technical assistance to the Ministry of Women and Social Action (MMAS) and implementing partners to improve the quality of services offered to vulnerable children and families affected by HIV and to implement approved standards. This work is building on previous orphans and vulnerable children work implemented in Mozambique through HCI since 2010. ASSIST is also supporting the Ministry of Health to draft standards for home-based care and is supporting Partnership for HIV-Free Survival activities at the community level.

Scale of USAID ASSIST's Work in Mozambique

HIV/AIDS (including OVC)

MMAS, MOH, 80 Implementing Partners

7 facilities

8 communities

95 Quality Improvement Teams

1.8 million OVC out of 11.8 million children

PROGRAM OVERVIEW

Activities	What are we trying to accomplish?	At what scale?	Improvement Activity	Activity
1. Improve care and support of vulnerable children and their families	• Improve the quality of OVC services & care through distribution of national service standards in 11 provinces • Identify and address critical barriers in the scale up and sustaining of effective high-impact interventions provided to vulnerable children and their families	Distribution of standards to 11 provinces 80 IPs adopting and integrating the standards into to their work plans		x
2. Draft and pilot home-based care (HBC) standards	• Finalize the HBC standards in Mozambique	Pilot in 2 communities in 1 district each in Gaza, Sofala and Cabo Delgado provinces		x
3. Partnership for HIV-Free Survival	• Quality improvement technical assistance to communities for the Partnership for HIV-Free Survival	Mozambique – 95 sites in 8 communities in 3 provinces (Gaza, Sofala and Zambezia)	x	

Activity 1. Improve care and support of vulnerable children and their families

KEY ACCOMPLISHMENTS

- **During the first quarter, ASSIST supported the Ministry of Women and Social Action (MMAS) in conducting a national mapping exercise** that sought to identify IPs with human and financial resources targeting vulnerable children in all 11 provinces in Mozambique. A simple tool was developed for contacting provincial-level organizations to assist in the assessment process. A total of 147 IPs working with vulnerable children were identified. The mapping was the first step in establishing a comprehensive picture of all the partners in each province that would be reached through the roll-out of the service standards. The mapping provided information on who the partners were, what services they provided, what groups of children their programs served, identified in which districts and communities they were implementing their programs. In addition, the mapping exercise identified the major stakeholders USAID ASSIST needed to engage in the roll-out of the service standards.
- **Provided technical assistance to MMAS to conduct regional workshops.** Workshops were held in the southern (Q1) and central and northern regions (Q2). The main purpose of the workshops was to disseminate the OVC standards and support teams and their IPs to design and come up with implementation plans for the OVC standards at the provincial level.
- **ASSIST supported MMAS in following up with all 11 provinces to see how far the provincial teams had disseminated and integrated the standards into their organizational implementation plans.** Seven of 11 provinces organized provincial meetings with the OVC provincial TWG to present the standards, the tools, and refined the implementation plans for the standards that were developed at the end of each of the three regional workshops.
- **Facilitated training of trainers of community child protection committees (CCPC) led by UNICEF and MMAS.** ASSIST was invited as a member of the TWG to be part of the facilitation group of three regional trainings of trainers of CCPCs. The first regional training took place in the southern region in March 2014. It involved four provinces and 34 participants. ASSIST took advantage of the opportunity to share and disseminate the OVC standards tools. Both MMAS and UNICEF have concurred that for the present, no new tools would be developed other than those tools developed and approved together with the OVC standards in July 2013. It was equally agreed by all parties that the OVC tools would be incorporated into the CCPC training of trainers manual.
- **Mozambique's OVC standards' experience was showcased at the Southern Africa**

Development Community (SADC) Minimum Package of Services training and review meeting held in Johannesburg, South Africa.

- Mozambique was represented by Dr. Francisca Lucas, the Director for Social Action in MMAS at the "Regional Training and Review meeting on the implementation of the SADC Minimum Package of Services (MPS) for OVC & Youth" that was hosted by the SADC Secretariat on March 20-21, 2014 in Johannesburg, South Africa.
- ASSIST supported the preparation of Dr. Francisca's presentation on key results from the pilot phase, including the data of children who improved their status through the implementation of standards in all three pilot provinces, and the steps that have been taken after the standards approval as well as the outcomes from the OVC regional dissemination workshops concluded in February 2014.
- Feedback from Dr. Francisca Lucas upon her return to Maputo after the meeting was "Mozambique received some resounding ovation from the participants for being the only SADC country so far with the OVC standards approved and disseminated at national level, with provincial implementation plans in place."

- **Provided technical support to integrate and implement OVC standards.**
  - In May 2014, 70 participants representing members of Children Networks, and government institution at provincial and district levels benefited from a one-day workshop on the OVC Standards and PNAC II organized by the Children's Network and Maputo City MMAS authorities.
  - World Vision (Mozambique office), in designing their annual activity plan for FY15, requested ASSIST to support them in integrating the OVC standards into their work plans.
  - MMAS asked ASSIST to provide technical assistance to Save the Children's essential package pilot process in Inhambane, Zambezia and Niassa, building on ASSIST's knowledge on lessons learned from the development of OVC standards, tools and good practices.

Activity 2. Draft and pilot home-based care standards

KEY ACCOMPLISHMENTS

- **Draft of HBC standards approved by USAID Mozambique project managers** (Q1). The HBC standards document was submitted to the MOH for review before piloting.
- **HBC minimum standards document write-up finalized** (May 2014). ASSIST made a presentation on the development of HBC minimum standards to the Ministry's HIV Department. The M&E indicators are under review by the TWG.

Activity 3. Partnership for HIV-Free Survival

KEY ACCOMPLISHMENTS

- **Conducted the PHFS situational analysis of health structures, coaches trained, and QI teams formed in three provinces** (January 2014): Gaza, Sofala and Zambezia. In one district of Gaza Province, 18 QI teams were found to be functioning, supported by the MOH. In one district of Sofala Province, FHI 360 had trained 48 coaches from community-based organizations to support activities in 21 villages. In two districts of Zambezia Province, World Vision and ADRA are supporting activities in five health centers and 21 health posts. Similar to the community health system approach being applied by ASSIST in other countries, the community component of PHFS work in Mozambique focuses on mobilizing existing community groups to support the efforts of the government-supported community health volunteers (CHVs),
- **Provided coaches' training.**
  - Gaza Province (February 2014) – 20 PHFS coaches were trained. From this training, 18 community QI teams were established, and have carried out their first QI team meetings. ASSIST is working on providing training to the remaining 20 community QI teams in Gaza.
  - The 18 community QI teams have met four times since the training and have been able to collect data on the pregnant women from their respective groups and villages. In Licilo, they recorded that a total of 180 women out of 206 in 15 villages received ANC services in March

2014. This data was brought to the monthly community QI meeting by a nurse from Licilo health post in March.

- Sofala Province: In collaboration with FHI 360, ASSIST trained 48 coaches and supervisors from all the 21 villages by the end of February 2014. In addition, in May, ASSIST provided four days of PHFS technical support to FHI 360's Community Care Program during which a detailed PHFS implementation plan for Dondo and Mafambisse covering all the 21 sites for Sofala was developed. Thirty seven participants (CBO volunteers, community leaders, nurses, religious leaders, traditional healers) benefited from the training.
- Zambezia Province (May 19-23, 2014). In collaboration with World Vision**,** ASSIST supported 45 participants by providing a five-day coaches' technical training in Mocuba and Namacura districts. A detailed work plan was produced in which a well laid out community support structure was discussed and agreed upon. Roles and responsibilities of ASSIST and World Vision were discussed and agreed upon.

- **Conducted learning sessions.**
  - First community PHFS learning session, Bilene District of Gaza Province (May 5-7, 2014): Drs. Ram Shrestha (ASSIST) and Justin Mandala (FHI360) provided technical support. Forty participants including health staff, nurses, community leaders, religious leaders, EGPAF, HEALTHQUAL, and FHI 360 participated. Workshop participants were oriented to the data collection tools.
  - Absence of addresses of pregnant mothers in the ANC registers made it difficult for the nurses to provide accurate data for the community QI teams. The teams agreed to test out a card system to track the pregnant mothers who receive their first ANC service.
  - Before May, 17 out of 39 villages were active under the PHFS. By end of June 2014, 31 community QI teams had been formed in 31 villages, with only 8 villages remaining. This significant improvement in participation came as a result of the involvement of community leaders in mobilizing the beneficiary households.
  - In the remaining eight villages, there are no active community groups that have been identified. The PHFS coaches together with the community leaders resolved to address this gap by working with groups composed of 10 households.
  - The second PHFS learning session was conducted in Gaza Province for 39 sites (August 2014). The learning session had 90 participants (twice as many as compared to the first learning session conducted in May 2014). While the first learning session focused on community organization, mobilization, and group orientation, the second learning session focused more on the introduction of QI into the communities in rural settings, addressing issues of literacy and numeracy.
  - Data capturing and record keeping at group and committee levels was discussed at length at the learning session. To date, community-managed registers or records are kept at group and committee levels. As teams received more clarity on their roles and responsibilities, the number of functional community groups has since increased from 202 in July 2014 to 227 by end of September 2014, further increasing coverage in reaching out to more households.
  - After hearing and listening from the participants contributions during the August learning session, the Bilene Health District Director, Dr. Fanwel Baloi, asked ASSIST to provide technical support in building the capacity of his district team to master the community system approach linking with QI in order to reach out to all facilities in the district. A follow-up meeting was conducted in which HEALTHQUAL, ASSIST, and the MOH Senior QI Advisor all agreed to support Bilene Health District in Gaza.

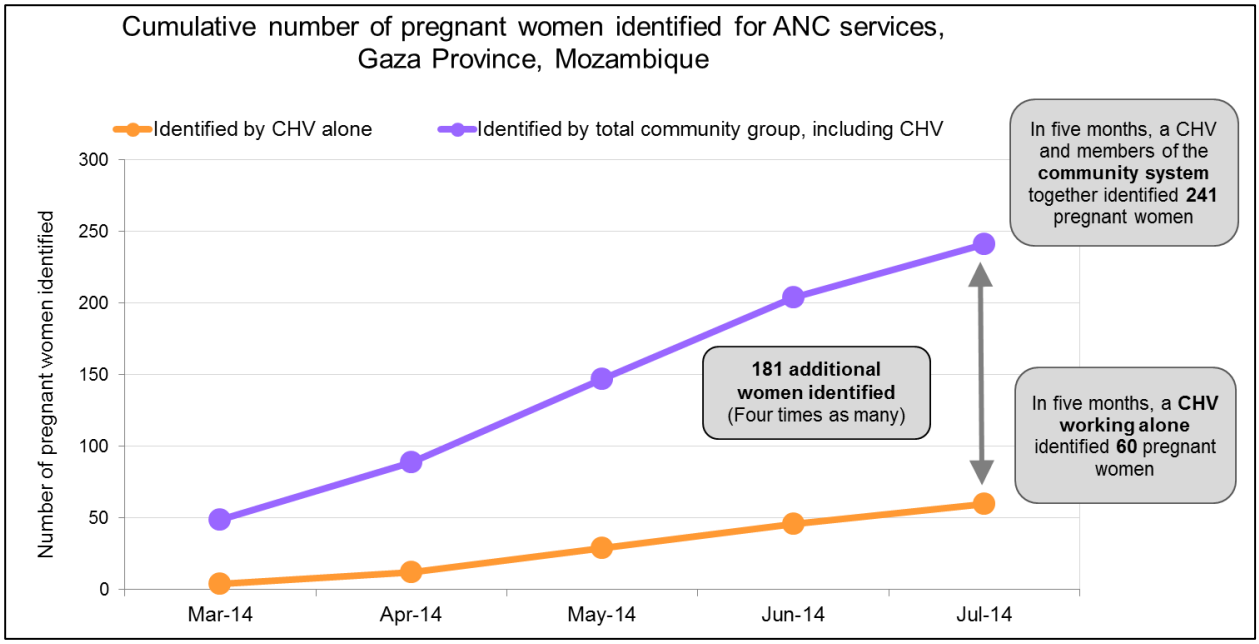
RESULTS

Improvement in Key Indicators

Activity	Indicators	Baseline (March 2014) 15 communities, Licilo Health Center	Last value (October 2014) 15 communities, Licilo Health Center
PHFS	Number of pregnant women identified for ANC services	103	660
	Percentage of identified pregnant women receiving ANC services at the health facility in the same month as identification	36%	87%
	Percent of identified pregnant women tested for HIV in the same month	36%	78%
	Percent of HIV-positive pregnant women initiated on treatment	100%	100%

- **Increased number of pregnant women identified for antenatal care:** There has been an increase in the number of pregnant women identified for ANC services in Gaza Province through use of the community groups (Figure 34).

Figure 34: Mozambique: Pregnant women identified for ANC services by CHV alone and CHV working with community groups, Gaza Province (March – July 2014)



SUSTAINABILITY AND INSTITUTIONALIZATION

USAID ASSIST has fostered country ownership throughout the development of standards for OVC care. MMAS has led the process of developing and implementing the National Guidelines, which have become national policy. We worked with MMAS to form QI teams of multisectoral stakeholders, from multiple levels (national and local government, facilities, CBOs, communities). This resulted in collaboration among people that usually do not work together but have discovered the benefit of their mutual cooperation. Additionally, ASSIST's practice of following trainings with ongoing coaching and follow-up results in greater likelihood of holding the gains. We have also built capacity of MMAS to continue follow-up for the standards and developed tools for the implementation that will support the

MMAS beyond the life of the project.

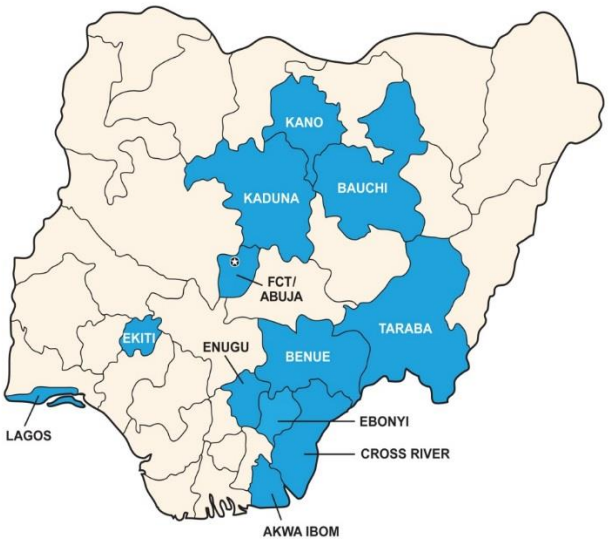
In addition, USAID ASSIST has worked with the MOH to develop standards for HBC, which have been approved for piloting. Once these are pilot tested and adopted as policy, the standards will guide all HBC care services in the country. We have trained over 110 coaches and supervisors in three provinces in quality improvement methodology, which they will use immediately to improve care around PMTCT, but will also retain these skills which can be applied to other priority health areas. Locally appropriate solutions for improving access and retention of HIV-positive mothers in care were developed at the community level in collaboration with the health center. These solutions were developed by the communities themselves, leading to ownership of the new ways of working.

NIGERIA

BACKGROUND

The USAID ASSIST Project began implementing activities in Nigeria in October 2012, building on the activities carried out under HCI since 2011. ASSIST provided technical assistance to develop the capacity of civil society, local governments, and state governments under the Umbrella Grants Mechanism (UGM). The UGM is a USAID-funded mechanism being implementing by Catholic Relief Services (CRS) (SMILE Project), Save the Children International (SCI) (STEER Project), the Federal and State Ministries of Women Affairs and Social Development (FMWASD) and implementing partners to improve the quality of care and support services for vulnerable children and their caregivers in 10 states (Sokoto, Kano, Kaduna, Plateau, Bauchi, Edo, Kogi, Benue, Federal Capital Territory, and Nasawara).

Scale of USAID ASSIST's Work in Nigeria



HIV/AIDS (including OVC)

Min Women Affairs & Social Development, 2 IPs

100 communities

200,000 out of 2.5 million vulnerable children

PROGRAM OVERVIEW

Activities	What are we trying to accomplish?	At what scale?	Improvement Activity	Activity
1. Improve the quality of vulnerable children	• Improve health, education, psychosocial support, child protection,	States: 10 of 36 states in Nigeria:Sokoto, Kano, Kaduna, Plateau and Bauchi,Edo, Kogi, Benue, Federal Capital Territory, and Nasawara Implementing partners: Save the Children/STEER	x	

Activities	What are we trying to accomplish?	At what scale?	Improvement Activity	Activity
services in Nigeria	nutrition and food security and economic strengthening services for vulnerable children and their caregivers in 10 states in Nigeria by September 2014	Project, Catholic Relief Services/SMILE Project Local government area (LGAs): 28 out of 208 LGAs Communities: 100 Target population - 200,000 vulnerable children - 9 state FMWASD -100 community-based organizations		

Activity 1. Improve the quality of vulnerable children services in Nigeria

KEY ACCOMPLISHMENTS

- **Trained 15 management staff of the CRS SMILE Project team and 18 management staff of the SCI STEER Project team on improvement science and its application on program implementation for vulnerable children in Nigeria** (Q1)**.** The three-day training covered improvement methodology, the Plan-Do-Study-Act (PDSA) cycle, learning sessions, and monitoring progress.
- **Drafted Memoranda of Understanding (MOUs) with Catholic Relief Services and Save the Children International for partnership in the SMILE and STEER projects** (Q1). The MOUs define the roles that each partner will play in building the capacity of UGM sub-grantees, who arecommunity-based organizations (CBOs) selected by SCI and CRS.
- **Trained state technical working groups on vulnerable children on improvement methodology and how to use the the national OVC standards** (Q2)**.** Participants were trained on the four major steps of improvement methodology through participatory training among three teams. At the end of each exercise, teams made presentations on what they worked on. The team also elected their officials and agreed on the composition of the local government authority (LGA) improvement team, the community improvement team, and learning session invitees.
- **Trained and inaugurated 10 state improvement teams** in Edo, Benue, Nasarawa, Bauchi, Kano, Kaduna, Sokoto and Plateau. Forty-seven CBO staff (22 supported by SMILE and 25 supported by STEER) and 29 LGA staff of Kano, Kaduna, Bauchi, Plateau and Sokoto states were trained on improvement science and how to use the final draft of the national service standards for vulnerable children (Q1-2).
- **The National Standards for Improving the Lives of Vulnerable Children in Nigeria, developed by the FMWASD and implementing partners in Nigeria, with technical assistance from ASSIST, were officially handed over in a ceremony on August 27, 2014.** FMWASD's Permanent Secretary, Dr. Habiba Mudu Lawal, and the Director of Child Development, Mrs. Rabi Galadima, were joined by representatives from USAID, including Susan Coleman, Director of HIV and AIDS; Division Leader for Community Programs Joanna Nwosu; OVC team leader Doreen Magajid; and Pamela Gado, the Agreement Officer's Technical Representative. The National Standards identify seven core areas that must be included in the comprehensive care and support of vulnerable children: health, food security and nutrition, education, legal protection, psychosocial support, shelter and care, and household economic strengthening. The standards provide a uniform, evidence-based and results-oriented approach for service providers in Nigeria to ensure that all children reach their full developmental potential through the provision of quality care and support services. Desired outcomes of services in the seven core areas are defined within the standards, and indicators to measure outcomes are recommended. They also provide a basis for training and supervising service providers.
- **The ASSIST/Nigeria office was closed as of August 31, 2014, and all staff released from duty.** Conversations with Nigeria are ongoing to provide technical assistance to three new Local Partner Initiatives, beginning in early 2015.

SUSTAINABILITY AND INSTITUTIONALIZATION

The National Standards have been adopted as a government document to be used by all vulnerable children's service providers in the country. The project's major achievements in sustainability and institutionalization were:

- **The establishment of quality improvement teams at the community and state levels within piloting communities and their respective states.** These QI teams provided the structure to sustain and institutionalize the use of a standards-based improvement approach.
- **The establishment of a six-person improvement team at the FMWASD.** The role of this team is to ensure that all community-based organizations in Nigeria use the National Standards for Improving the Quality of Vulnerable Children Services in the provision of services to vulnerable children.
- **The formation of a National Quality Improvement Task Force for Vulnerable Children composed of all the implementing partners that participated in the pilot.** The role of the task force is to lead, coordinate, and guide policy makers and implementing partners in improving quality of programs tailored to mitigate the impact of HIV and AIDS on children and families by developing a strategic implementation plan to delineate clearly the major milestones of the QI process.
- **Establishment of state improvement units.** At the state level, ASSIST facilitated the establishment of improvement units in all 10 assisted states.

SOUTH AFRICA

BACKGROUND

The USAID ASSIST Project is working with provincial and district health authorities in five provinces to increase the quality of HIV prevention, care, and treatment services and to build capacity at all levels in strategic planning, supervision, program review, training and mentorship, development of clinical skills, and policy development.

Building on URC assistance to the National and Provincial Departments of Health since 2000, ASSIST's work began in South Africa in October 2013 and provides technical assistance in health systems strengthening at national and provincial levels as a "Specialized Provincial Partner for Quality." ASSIST's scope of practice includes support for improving the quality of HIV and maternal, newborn, and child health services, strategic planning, district development, and primary health care (PHC) clinic supervision in five priority provinces: Eastern Cape (EC), KwaZulu-Natal (KZN), Limpopo, Mpumalanga (MP), and North West. In May, USAID requested that URC add a new activity: conduct a baseline quality assessment of voluntary male medical circumcision (VMMC) services supported throughout the country by USAID and CDC.

PROGRAM OVERVIEW

Activities	What are we trying to accomplish?	At what scale?	Improvement Activity	Activity
1. Increase quality of HIV prevention, care, and treatment services	• Increase HIV counselling and testing (HCT) uptake by 20% in 12 months • Reduce time to ART initiation for HIV+ clients by 20% • Increase retention of HIV+ clients on ART in care by 30%	5 out of 9 provinces, (56% of all primary health care facilities in 9 provinces) 30 communities 7 QI teams	x	

2. Build capacity of Department of Health (DOH) staff	• Build capacity of key DOH staff (PHC supervisors and facility managers) in all provinces in strategic planning, supervision, program review, training, and mentorship	5 out of 9 provinces		x
3. Conduct a baseline assessment of the quality of VMMC services in sites supported by USAID and CDC	• Determine the current quality of VMMC services being provided in USG-supported sites to inform the selection of sites for subsequent support for continuous quality improvement of VMMC services	134 VMMC sites in 9 provinces 9 implementing partners (5 CDC and 4 USAID)		x

Activity 1. Increase quality of HIV prevention, care, and treatment services

KEY ACCOMPLISHMENTS

- **Conducted QA/QI learning sessions** (Q1). Conducted two learning sessions for health care workers (HCWs) in EC and MP implementing PMTCT QI activities. Two parallel sessions were organized and a total of 91 participants attended including DOH staff, PEPFAR implementing partner organizations and NGO stakeholders. Conducted five learning sessions for health care workers in KZN on the newly launched National Contraceptive and Fertility Preservation guidelines. Sequential training sessions were held in 5 different districts within KZN province, and a total of 103 primary health care nurses were trained.
- **Developed Action Plans** (Q1). Developed suitable implementation plans and IEC materials to improve HCT, PMTCT and maternal health care in EC, MP, and KZN.
- **Conducted community dialogues in EC and KZN** (Q2) to encourage women to attend ANC early, test for HIV during their first ANC visit, and consider family planning (FP) options in the postnatal period.
- **Conducted PHC Facility Assessments** (Q1)**.**
  - Provided lead mentorship and technical assistance during assessment of 16 PHC facilities in KZN to gauge progress with implementation of National FP guidelines & quality of FP services.
  - ASSIST staff formed part of the team selected to assess four facilities on the quality of ART and maternal, child, and women's health services.
- **Supported the Eastern Cape with data validation and verification, during the quarterly "Data Mop-up" exercise** (Q2)**.** This resulted in verification of over 20,000 HCT clients who had not been formally recorded.
- **Participated in provincial assessment of ART programs,** which showed that accurate and timely recording and reporting has improved by 40%.
- **Development of an overall Quality Strategy for HIV and AIDS programs, Eastern Cape** (Q2). This is an ongoing activity which involves various consultative meetings with the province to review HIV and AIDS program reports, strategic plans and development of a set of standardized quality improvement indicators (which will be monitored on a quarterly basis by all districts).
- **Provided support for ART data verification, Eastern Cape** (Q2): Provided support to the DOH to convene a workshop for all sub-district information officers and HIV program officers, in order to verify and correct missing ART data for all sub districts.
- **Participated in HIV and AIDS Program quarterly review meetings, Mpumalanga (Q2).** ASSIST provides ongoing mentorship and technical assistance to all three districts in the province during the quarterly program review meetings. The main strength of these quarterly review meetings is that they allow all stakeholders to assess the HIV program performance against the set targets on the strategic plans, and make the necessary amendments.
- **Participated regularly in the District/Provincial HIV, AIDS and Sexually Transmitted Infections Program (HAS) quarterly review meetings** (July – September 2014). The objectives of the reviews included HAS Program performance, implementation of the fixed-dose combination

(FDC) ARVs policy, challenges, ART data management, sustainability, QI plans, learning and sharing best practices, as well as development of intervention strategies in areas where the districts are not performing well.

- **Developed an EC Provincial QI strategy and mentoring for the HIV/ AIDS program** (July – September 2014). ASSIST staff have been working on developing this strategy, in collaboration with Eastern Cape-DOH Provincial managers. As a result there has been significant progress. A draft QI strategy was shared / presented to the province for inputs. The ASSIST Project is expected to take a lead in the province in disseminating and implementing the strategy, once finalized.

RESULTS

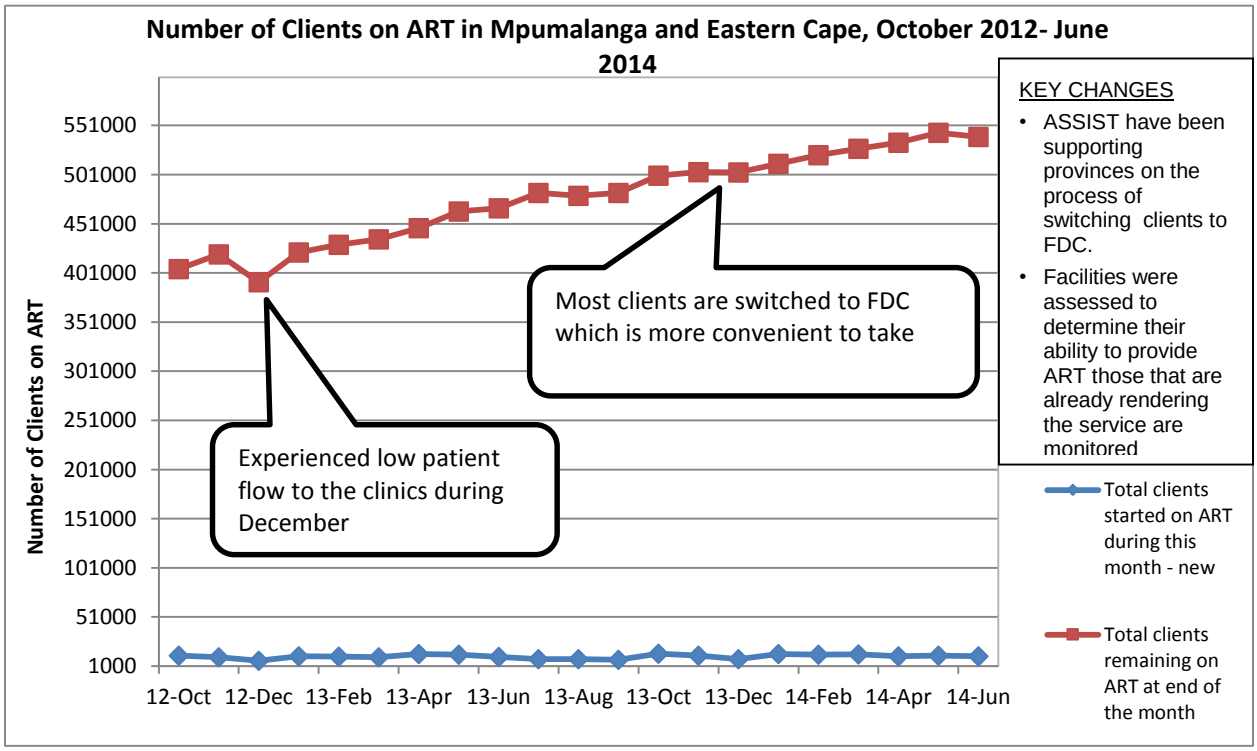
Improvement in Key Indicators

Activity	Indicators	Baseline	Last value
Increase quality of HIV prevention, care, and treatment services	HCT uptake (gen pop) No. of individuals remaining on ART at the end of the month (cumulative)	105,365 (April 2013)* 405,086 (October 2012)*	1,767,934 (June 2014)* 539,439 (June 2014)*

* EC and MP only

- **Overall improvement access to in ART services:**
  - Results show increased number of patients on ART in supported districts to 527,476 (Figure 71). PMTCT programs reveal improving Nevirapine uptake rates (99%) and declining PCR positivity rates (<3%).
  - ART access is improving steadily, as evidenced by the number of individuals initiated on ART on average is 10874 per month between October 2012 – June 2014 (Figure 35).
  - In Limpopo, ART support commenced in July. To date, 11, 2844 HIV-positive patients have been successfully switched from triple therapy to fixed-dose combination ARVs.

Figure 35: South Africa: Number of clients on ART in Mpumalanga and Eastern Cape (Oct 2012 – June 2014)



Activity 2. Build capacity of DOH staff

KEY ACCOMPLISHMENTS

- **Provided lead mentorship and technical assistance during** (Q1)**.** Training of 25 PHC supervisors in two provinces; data verification process in five sub-districts in one province; and inspection of two private facilities for licensing and accreditation.
- **Finalized data collection and data analysis for the 'Evaluation of PHC supervision in 96 facilities' in one province** (Q1).
- **Developed a draft National PHC Clinic Supervision Policy and Capacity Development Framework for PHC supervisors** (Q1).
- **FP: Trained 68 HCW on "Implanon insertions and theory" at UThungulu District-KZN (**Q2**).** This resulted in over 30 clients receiving "Implanon inserts" at URC-ASSIST mentored facilities.
- **Coordinated and facilitated a workshop on National Core Standards for Health Establishments (NCS) in MP that was attended by 40 participants** (Q2).
- **National Core Standards** (Q3). Orientation and mentorship provided to 14 District Managers with regards to the NCS, and their roles and responsibilities in relation to the DHMT.
- **Provision of support for M&E.** on a quarterly basis, project staff participate in "data mop-up" exercises in supported provinces. Over the reporting period, data verification was conducted at 91 facilities from 5 sub-districts of Sekhukhune District [i.e. cross system-check (register, monthly summary, and DHIS data)].
- **Quality assurance/quality improvement training** (Q3)**.**
    - Conducted training & mentoring to 16 senior sub district managers and their respective DHMTs.
    - Mentored 11 facilities on quality improvement strategies. Facilities have completed their quality improvement plans, which have been presented and reviewed by various provincial managers.
- **Built capacity of DOH staff** (Q3).

ART: Provided capacity to and mentored 19 professional nurses on the new FDC guidelines, in order to strengthen ART monitoring in Joe Gqabi district (August 2014). One of the main challenges identified was the fact that some nurses trained in nurse-initiated ART were reluctant to prescribe FDC, leading to high defaulter rates.

NCS: Conducted two NCS sub-district trainings in Ehlanzeni District, for 75 participants (July 2014). Over 90% of the DMT has been introduced to the NCS. One of the gaps noted, however, is that presently there are no systems in place to monitor and evaluate the impact of the training.

QA/QI: Development of QI Plans (July – September 2014): Provided technical support to Umjindi sub-district QA managers in developing their QIP using challenges identified through performance of National Core Standards (NCS) for Health Establishments self-assessments. Provided technical support in developing the Ehlanzeni district QA operational plan.

Monitoring and Evaluation (M&E): Conducted HAST data verification visits in OR Tambo District, in the EC (July – August 2014). The exercise included capacitating staff from all the sub districts (KSD, Nyandeni, Qaukeni and Mhlontlo) to verify and check missing data. Some of the data quality issues necessitating the verification exercises included the following: data inconsistencies at all level of reporting, no data verification exercises taking place and incomplete information from the registers.

FP: Provided ongoing mentoring sessions to 24 health facilities in KZN (July – September 2014). At the site level, the URC coordinator provided practical trainings to health providers on family planning methods, including FP heath talks to clients. Over the quarter, 349 clients had Implanon or IUD insertions performed and 703 clients were provided with FP heath talks.

Activity 3. Conduct a baseline assessment of the quality of VMMC services in sites supported by USAID and CDC

KEY ACCOMPLISHMENTS

- **Designed an assessment tool based on the WHO VMMC Quality Assessment Toolkit.** The

ASSIST team piloted the assessment tools in two facilities and made revisions based on the pilot test.

- **Completed baseline data collection in 134 sites in 9 provinces.** URC mobilized 25 staff from its South Africa office to carry out the baseline assessments in 134 out of the expected 160 USG-supported VMMC sites across all nine provinces of the country. This involved coordinating with both USAID and CDC as well as nine implementing partners (5 CDC partners and 4 USAID partners). Data were collected during June through August.
    - Began data analysis and reporting. Each URC assessment team provided a verbal debriefing with each site immediately after the assessment. Written assessment reports with findings using a color-coded dashboard and detailed findings are in process; reports are in preparation for individual sites, each implementing partner, CDC partners as a whole, and USAID partners as a whole.

SUSTAINABILITY AND INSTITUTIONALIZATION

Over the year, the ASSIST Project has worked to ensure sustainability within the following areas:

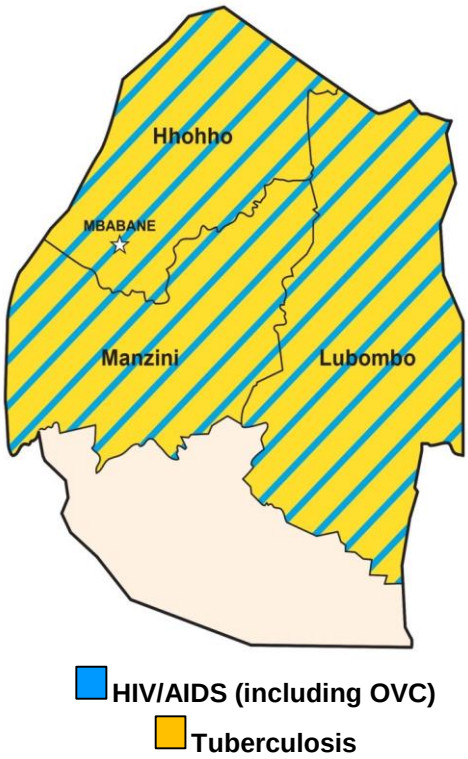
- **Quality assurance / quality improvement**. Collaborating with other implementing partners, providing regular technical assistance, data quality audits, and building QA/QI systems is necessary to maintain the quality and appropriateness of HIV care services.
- **PHC supervision.** Effective supervision is key to improving quality of services. Working with national and provincial DOH staff, ASSIST is ensuring that PHC supervisors have the necessary skills, time and resources to supervise effectively.
- **Data management**. Data management should form part of all improvement projects. Quality of data management impacts heavily on recorded program outcomes. In order to ensure sustainability, ASSIST staff worked with provincial staff in the five provinces to implement 'data mop-up' and 'data verification' activities on a quarterly basis.
- **HIV and AIDS services**. ASSIST staff have worked with the EC DOH on developing a provincial strategy for HIV and AIDS programs, in order to ensure sustainability and institutionalization of QA/QI initiatives.

SWAZILAND

BACKGROUND

The USAID ASSIST Project began working in Swaziland in October 2012. Building on the work done by HCI from 2008, ASSIST continues to support the Ministry of Health Quality Assurance Program and stakeholders to institutionalize modern quality improvement through improving the national capacity to conduct QI planning, implementation, and evaluation; building the capacity of health care workers and QI mentors on quality improvement; and improving health care QI performance measurement at national, regional, and health facility levels. Additionally, ASSIST works with the National Tuberculosis Control Program (NTCP) and the Swaziland National AIDS Program (SNAP) to expand the coverage of integrated TB/HIV diagnostic and treatment services and improve TB treatment outcomes as well as the quality of TB, TB/HIV, and multidrug-resistant (MDR) TB services. ASSIST works with the Ministry of Health to apply lessons learned from established HIV and TB quality improvement activities and scale up integrated service delivery models and algorithms for health facilities and providers.

Scale of USAID ASSIST's Work in Swaziland



MOH

85 TB facilities

30 Quality Improvement Teams

841,752 out of 1.141 million

PROGRAM OVERVIEW

Activities	What are we trying to accomplish?	At what scale?	Improvement Activity	Activity
1. Support the MOH and implementing partners to institutionalize modern quality improvement approaches	• Improve national capacity health care QI planning, implementation and evaluation • Build the capacity of health care workers, and QI mentors on quality improvement • Improve health care QI performance measurement, at national, regional and health facility levels	Countrywide (4 regions) Population: 1,141,000 85 TB diagnostic clinics		x
2. Establish integrated TB/HIV/non-communicable disease (NCD) model clinics and centers of excellence for MDR-TB clinics	• Establish integrated TB/HIV/NCD health services to improve implementation of the essential health care package (EHCP) • Establish the MDR-TB hospital and TB center as centers of excellence	3 out of 4 regions: -Hhohho Region: 3 model clinics and 4 TB/HIV comprehensive care clinics -Manzini Region: 1 TB/HIV comprehensive care clinic, the TB hospital Moneni, and the TB center clinic -Lubombo Region: 2 TB/HIV comprehensive care clinics	x	
3. Implement high quality DOTS expansion for TB and MDR-	• Increase case detection of TB • Increase TB treatment success • Increase TB/HIV integrated management	Target population: 1,141,000 Focus regions: 3 out of 4 regions direct support and technical support to Shiselweni Region	x	

Activities	What are we trying to accomplish?	At what scale?	Improvement Activity	Activity
TB and strengthen implementation of integrated TB/HIV prevention, care, and treatment	• Ensure proper management of MDR-TB • Strengthen TB infection control • Increase research and use of evidence in designing in priority areas interventions and policies	-Hhohho Region: 17 health facilities (2 hospitals, 2 health centers and 13 primary health clinics). Population: 309,184 -Manzini Region: 12 facilities in (2 hospitals, 1 specialized clinic and 9 primary health clinics). Population: 352,568 -Lubombo Region: 12 facilities in (1 hospital, 1 health center, 3 private industrial clinics and 7 primary health clinics). Population: 180,000		
4. Implement advocacy and social mobilization interventions to improve HIV and MDR-TB services uptake and outcomes	• Strengthen the capacity of NTCP to develop and implement a TB ACSM strategy • Improve the early detection of TB, TB/HIV and MDR-TB health facilities and communities • Increase community engagement in support TB patient treatment adherence	-85 health facilities in 4 regions -All community treatment supporters in the 4 region All municipalities in 4 regions		x
5. National Framework for In-service Training	• Design and implement a national framework for in-service training in Swaziland	National All implementing partners with in-service training programs; facility in-service training coordinators		x

Activity 1. Support the MOH and implementing partners to institutionalize modern quality improvement approaches

KEY ACCOMPLISHMENTS

- **Built the capacity of health care workers (HCWs), and QI mentors on quality improvement** (Q1). Conducted 6 facility coaching sessions to TB/HIV clinics in the Hhohho and Manzini regions with previously trained NTCP regional TB coordinators who are being mentored to serve as mentors/coaches for the TB/HIV clinics.
- **Conducted facility-based review meetings (3 facilities)** (Q1)**.** Improved health care QI performance measurement at national, regional, and health facility levels. A total of 38 health care workers participated. QI projects included early ART initiation among HIV-infected TB patients.
- **Conducted/participated in a QA/QI training for health care workers and mentors** (Q2). The training included counterparts from the TB hospital, TB center, the Swaziland Health Laboratory Services, and the MOH Quality Management Program (QMP). The main objective of the training was to improve participant skills on identifying and utilizing quality improvement tools during coaching and mentoring of the health facilities.
- **Conducted on-site facility trainings on QA and QI** (Q2). In February 28, 2014 Good Shepherd Hospital staff in the Lubombo Region were trained on QI methodologies and supported to start their first quality improvement projects. Subsequently from March 11-13, 2014, 20 HCWs from Mbabane Government Hospital and Mahwalala Red Cross Clinic in Hhohho Region were trained on QI methodologies and approaches.
- **Supported collaborative feedback sessions at facility and regional levels** (Q2). ASSIST supported the QMP to conduct collaborative interdepartmental feedback sessions at the facility level for 10 facilities. A joint collaborative learning session was held on February 19, 2014 for the

Shiswelweni Region.

- **Developed a customer satisfaction survey tool and protocol and submitted it to the Scientific Ethics Committee** (Q2).
- **USAID ASSIST in collaboration with the Quality Management Program hosted Swaziland's first ever "National Annual Health Quality Forum"** (April 14, 2014). The forum was attended by 200 participants from the regional health management teams, hospital and health center management, health care workers, and implementing partners. The objective was to share best practices of quality improvement initiatives, to provide technical updates on continuous quality improvement, and to catalyze improvements in health care using modern quality improvement/QA methodologies.
- **Conducted QA/QI training of health care workers in collaboration with the QMP** (Q4)**:** 47 HCWs from Mbabane Government Hospital and Good Shepherd Hospital were provided with technical support and 13 participants were trained as trainers on QA/QI techniques. Four integrated QA/QI trainings were conducted for TB/HIV with 125 participants. Conducted Quality Management Systems training for 7 participants. Conducted collaborative sharing sessions at facility levels, regional, and national levels reaching 14 participants, 23 participants, and 212 participants, respectively. ASSIST conducted a joint QA/QI mentoring and supportive supervision with six health facilities specifically targeting QA/QI trainers.
- **Conducted an orientation of customer care focal persons workshop** (July 17-18, 2014): During the workshop, coordination mechanisms for customer care services at facilities were established; terms of reference for customer care focal persons were defined; and key components of a customer care program were discussed. Participants represented five hospitals and two health facilities.
- **ASSIST provided technical expertise to develop a national MOH customer care program framework in alignment with the national QA strategic plan** (Q4). The document aims to standardize management of the patient complaint system, suggestion box, training, feedback system, customer satisfaction survey, and key customer care indicators.

Activity 2. Establish integrated TB/HIV/NCD model clinics and centers of excellence for MDR-TB clinics

KEY ACCOMPLISHMENTS

- **Worked to establish integrated TB/HIV/NCD Model Clinics** (Q1-Q2)**.** Following the selection of the model clinics to implement the essential health care package, the three model clinics were supported to develop work plans and start implementation of activities, which included integration of bidirectional screening for diabetes and tuberculosis, provision of integrated TB/HIV care, and integrated sexual reproductive health services (e.g., STI treatment and family planning).
- **Conducted clinical mentoring visits for the three model PHCs and the six comprehensive TB/HIV care clinics** (Q2)**.** After a training needs assessment was conducted, onsite training in TB/HIV and intensified case-finding, isoniazid preventive therapy, and infection control (3I's) was conducted for three primary health clinics with 15 participants (May and June 2014). TB screening at two of the three model clinics is at 100%. Over the year the model clinics have each received 12 mentoring visits to strengthen the skills of the health care workers on providing integrated care. Each clinic received one supportive supervision visit per quarter to review progress and performance on implementation of the workplans.
- **Worked to establish the MDR-TB Hospital and TB Center as Centers of Excellence (COE)** (Q3)**.**
    - Completed the assessment of the MDR-TB hospital as a center of excellence and developed a workplan to address the areas of weaknesses that were identified in the assessment.
    - The TB center received support from ASSIST to start a new quality improvement project. The performance data at the center was reviewed jointly by the TB center staff and ASSIST, areas of weakness were identified, a root cause analysis was conducted, and an improvement plan developed. Following rotation of the staff at the TB center in September 2014, a structured orientation session was conducted for the 10 new staff. The session covered basics of TB, standard operating procedures (SOPs) for the TB center as well as the

expectations and roles of the new staff. They were also introduced to quality improvement methodology.

- **Equipped hospital management with management and leadership skills** (Q3).
  - ASSIST conducted workshops to build the capacity of the hospital management and Heads of Departments to function efficiently and effectively. Key outputs of the workshop were the development of a vision for the TB center, objectives and activities incorporated into a work plan matrix, motivating the staff to implement the work plan, and corrective measures in infection control and patient management outlined.
  - Conducted Leadership and Management Training for Better Health Outcomes (August 18-20, 2014) at the Institute of Development Management, for 16 participants from the National facilities' Heads of Departments (HODs). The training was aimed at equipping the managers and HODs with the necessary knowledge and skills to efficiently and effectively lead and manage their teams and ensure quality DR-TB service delivery.
- **Provided support at national level to implement EHCP** (Q3)**.** ASSIST provided technical assistance and resources to the national EHCP coordinator in order to provide oversight for implementation of the EHCP. 500 copies of the EHCP were printed to distribute to the health care workers to implement the EHCP.
- **Development of EHCP regional work plan** (Q3). From August 5-6, 2014, project staff working with the EHCP coordinator, EHCP national working group, and the Regional Health Management Teams (RHMTs) provided technical assistance in the development of the EHCP regional work plan. These activities facilitated identifying barriers in the implementation of the EHCP, creating awareness on RHMT roles and responsibilities in the EHCP roll-out, and identifying resources needed for implementation.
- **Integration of TB with non-communicable disease management** (Q3).
  - **Assisted the NTCP to address the integration of diabetes mellitus (DM) and TB services with the department of non-communicable diseases**. The current NCD policy guidelines are being revised and will include TB/DM integration. A bi-directional TB screening concept note was developed that articulates TB screening for diabetes patients and diabetes screening among TB patients. Training for 9 health facilities with 22 participants on implementing TB/DM bi-directional screening was conducted at the end of September 2014. These facilities will pilot the bi-directional screening and lessons learned will be used to inform the scale up.
  - **NCD coordination committee** (Q4): Participated in the national coordination forum and provided technical expertise for the integration of TB/HIV services including support to the NCD program for oversight and leadership for finalization of the NCD strategic plan and policy (July 8. 2014).

Activity 3. Implement high quality DOTS expansion for TB and MDR-TB and strengthen implementation of integrated TB/HIV prevention, care, and treatment

KEY ACCOMPLISHMENTS

- **Development of NTCP National Strategic Plan (NSP) 2015-2019.** The project provided technical expertise and resources for the review and development of the NTCP NSP 2015-2019. This was a consultative process with all the relevant stakeholders and involved a CDC consultant. The NSP incorporated a monitoring and evaluation (M&E) plan, and costing of the plan is ongoing. NTCP staff were trained on monitoring and evaluation concepts and approaches with training outputs. M&E tools were developed to monitor the new TB NSP.
- **TB care and treatment.**
  - **Accreditation assessment for clinics to offer TB services** (Q2). ASSIST staff supported Mpaka Refugee Camp clinic -- a refugee camp that houses about 200 to 300 individuals from different countries in Africa -- to become accredited to become a TB treatment initiation site. Areas of improvement identified by the team included inadequate consultation rooms for TB patients, staff shortage, and poor ventilation in the facility.

- **Community TB screening** (Q2)**.** The project continued to support the NTCP to reach different communities including schools, prisons, and the general public, providing health education and TB screening in order to find, test, and treat for TB.
- **Provided technical assistance and mobilized resources to support the scale-up of TB diagnostic services** (Q2). With assistance of the CDC lab strengthening project run by URC, five more GeneXpert machines were installed, bringing the total number of GeneXpert machines in the country to 26. Facilities have received training on using the GeneXpert machine for diagnosis, and follow-up mentoring was provided. Using the national sample transport system, all diagnostic facilities have access to GeneXpert services.
- **Conducted clinical mentoring and supportive supervision to facilities providing TB services** (Q2). Mentoring visits were conducted to 66 of the TB diagnostic facilities in the three regions. Recently appointed staff to the TB clinics were oriented on basic TB management and subsequent mentoring visits focused on improving the quality of care for delivered for each patient. This support has ensured HCWs to comply with TB and TB/HIV management manuals, guidelines, and SOPs.
- **The standards for TB care in Swaziland were finalized, printed and were distributed to 66 TB clinics.** The standards were adapted from the ISTC 3rd edition, the national TB guidelines and the SADC minimum standards for TB care.
- Provided technical support and coaching to reduce the burden of HIV in patients with presumptive and diagnosed TB by implementing HIV prevention measures (Q3). Project staff provided clinical mentoring to TB clinics to ensure that all presumptive TB cases and TB patients know their HIV status and that co-infected TB/HIV patients are provided with cotrimoxazole preventive therapy and promptly initiated on ART with the first 2-8 weeks of TB treatment initiation.
- **Addressed private-public partnerships** (Q3). ASSIST supported the AIDS Health Care Foundation facility to establish TB/HIV integrated activities especially the 3I's. A cough monitor has been provided to ensure TB screening is conducted for all patients; all nurses and doctors have been trained on IPT; and tools for recording and reporting have been provided. In August 2014, 15 of the facility's health care workers were trained on TB management at the facility level.

- **Addressed TB in vulnerable populations.**
  - **ASSIST continued to work with TB in the mines in FY14**. In collaboration with University Research South Africa, an advocacy activity was conducted in partnership with Ministry of Health and the Miners Association for continuation of TB care and treatment while they were on holiday in Swaziland. In December 2013, the Minister of Health met with 8 current miners and 10 ex-miners to discuss challenges they face in accessing care and treatment when they come home and were provided with information resources to improve their accessibility to care and treatment.
  - **ASSIST continues to support TB screening in maternal and child health settings.** Over the last 12 months, efforts to increase TB screening have included trainings on: TB screening and provision of isoniazid preventive therapy (IPT); needs-based onsite trainings for the nurses; and follow-up clinical mentoring to increase TB case-finding among this group of vulnerable populations.
  - **Provided support to correctional facilities (prisons)** (Q2). In March 2014, the mobile TB clinic in Matsapha prison initiated TB treatment and is refilling medication for patients who were already on treatment. The facility staff have received training to support the provision of IPT among inmates. ASSIST continues to provide support to the Technical Working Group (TWG) for correctional services for integrated TB and HIV care.
  - **Provided technical assistance to address pediatric TB** (Q1 and Q2). Orientation on the new provider-initiated testing guidelines was conducted in TB facilities to address testing among children. Support was provided to integrate pediatric TB screening into school health, maternal and child health and integrated management of childhood illnesses policies. The TB symptom screening questionnaire was integrated into the child health card.

- **Promoted proper management of MDR-TB.**
  - **Revised MDR-TB guidelines have been printed and are being distributed to health facilities** (Q1)**.** Onsite trainings on identifying high-risk populations for MDR-TB were conducted for 26 HCWs at 10 primary health clinics. These trainings were to increase the capacity of the HCWs to suspect and investigate high-risk patients for MDR-TB and link them to care.
  - **ASSIST staff supported the NTCP in reviewing and finalizing the training curricula for Clinical Management of DR-TB and TB/HIV management** (Q3).
  - **Following annual staff rotation in facilities and printing of the new guidelines, it was imperative to provide training in TB, TB/HIV and MDR-TB for staff in the TB clinics. Pre-service training was provided to the South African Nazarene University (SANU) graduating class of midwives.** Sixty (60) graduates were trained. An MDR-TB training was conducted in late July 2014 for 32 nurses and doctors from the 8 MDR-TB facilities in the country. The main objective was to equip the participants with knowledge and skills to be able to manage DR-TB cases. A post-training feedback workshop was conducted in September 2014. Twenty-two participants shared their experiences on management of MDR-TB patients. Conducted TB/HIV training September 15-19, 2014 for 36 HCWs. They were introduced to the new TB guidelines and the changes to the management of TB/HIV co-infection. ASSIST continued to support the TB clinics to improvement and monitor patient management.
  - **ASSIST continued to provide support to Good Shepherd Hospital** (Q2) to decentralize MDR-TB initiation to peripheral sites to increase access to and retention in MDR-TB care.
  - **Project staff provided clinical mentoring to the TB Hospital to strengthen clinical management of MDR-TB** (Q3). Four doctors and 20 nurses were mentored during the quarter.
  - **ASSIST supported the TB Hospital staff in development of standards of care at different departments of the hospital to improve service delivery towards making the facility a COE.** The project continued working with the lab involved in MDR case-finding to facilitate results reaching facilities and the Central unit in a timely way, to reduce the turnaround time which has helped early initiation of patients. In addition, ASSIST provided resources for procurement of treatment supporter bags and medicinal bags for MDR-TB patients.
  - **ASSIST staff strengthened the facility-based MDR-TB ambulatory care services and linked 59 DR-TB patients to PHC clinics for DOTS plus and continuum of care.** To improve referrals and linkages, every DR-TB patient is initiated on treatment before being referred to the lower level facilities. The PHC clinic nurse is contacted prior to the referral to ensure that the nurses at the PHC clinic are knowledgeable about MDR-TB care and are trained on DR-TB management. In cases where the nurses cannot manage MDR-TB cases, patients are then referred to their second choice PHC clinic.
  - **Through the use of community care for MDR-TB patients, patients defaulting treatment are traced and brought back to care.** Home assessments are conducted, and patients with social difficulties are admitted to the hospital at least for the duration of the injectable phase. This has contributed to improved interim outcomes and treatment success rates. Over the year, 274 patients benefitted from home assessments; 76 patients who had missed clinic appointments received a home visit and were brought back to care.
  - **Utilized Geographic Information System (GIS) mapping of MDR-TB patients and supporters to strengthen linkages** (Q2). To identify outbreaks/hotspots and improve patient support by clinical teams, a cumulative total of 962 drug-resistant (DR-TB) patients linked to 7 DR-TB sites were identified and mapped using GIS mapping.
  - **Conducted training of community treatment supporters for MDR-TB management.** ASSIST collaborated with the NTCP to conduct two trainings (August 11-15, 2014) on DR TB/HIV management for TB community treatment supporters. The first training had 34 participants (3 males and 31 females) while the second one had 40 participants (5 males and 35 females).The treatment supporters were equipped with skills and knowledge to carry out

monitoring visits to MDR-TB patients at the family level. Training objectives were to: training community treatment supporters on basic facts on (DR) TB/HIV management, patient support, and DOTS; sensitize MDR-TB/HIV supporters on the identification and appropriate referral of all symptomatic contacts; and orient MDR-TB/HIV treatment supporters on IPC and the use of new recording and reporting tools used during patient support and DOTS.

- **TB/HIV collaborative activities.**
  - **Strengthened mechanisms for delivery of integrated TB/HIV services from national to facility levels.** The project provided support for the TB/HIV National Coordinating Committee which meets quarterly to provide direction and guidance on integrated TB/HIV service delivery in the country. The four quarterly TB/HIV coordinating committee meetings focused on IPT implementation challenges and a roadmap for scale-up, developing a proposal for HIV-TB interventions for the Global Fund's new funding mechanism, and reviewing progress of decentralization of integrated TB/HIV services..
  - **Revised and printed the TB intensified case finding (ICF) and isoniazid preventive therapy (IPT) algorithms** (Q3) in response to health care worker queries on how ICF and IPT were linked as well as improve the uptake for IPT. Provision of 3I's in public health units has been addressed through providing training for the nurses, followed by training of the managers to ensure there is oversight for the implementation of the services. Follow-up mentoring is ongoing to address the operational issues of providing the 3I's, like successful referral for TB treatment among pregnant women diagnosed with HIV or ensuring consistent supply of isoniazid.
- **Promoting IPT for eligible people living with HIV.**
  - **The project supported an IPT cohort study in order to assess patient adherence, determining patient outcomes, identifying critical periods for future interventions, and investigating existing data collection practices in TB and ART clinics in 4 sites.** IPT data was collected in February 2014 from different hospitals in the country, and 401 patient records from centralized electronic databases were reviewed for patients initiated on IPT between September 2011 and January 2013. Tracing patient outcomes revealed that only 32% (128) of patients reviewed during the study completed treatment, while 56% (224) of patients defaulted on their course of IPT, 5% of patients were lost to follow-up, and 2% (8) transferred out. 30% of all patients with traceable default dates adhered through 4 months of treatment before defaulting within 2 months of their completion date, while 28% defaulted after their initial isoniazid prescription. On average, defaulting patients adhered to ART treatment for 18 months following their discontinuation of IPT.
  - **To scale up the provision of isoniazid preventive therapy for eligible people living with HIV, ASSIST conducted onsite trainings to seven primary health care clinics** (Q3). Forty five HCWs were trained. To date, 22 facilities in three regions have been supported to provide IPT.
  - **Conducted onsite training for IPT implementation (September 2014).** Eleven participants from Sigangeni clinic and 10 from Ezulwini Satelite Clinic were trained. The training focused on capacitating facility HCWs on IPT, describing the benefit of IPT for HIV-infected persons with latent TB infection, and to capacitate staff to appropriately screen eligible patients for IPT.
- **Increased research and use of evidence in designing priority areas interventions and policies.**
  - **Pediatric situational analysis on TB and MDR-TB was completed.** The analysis showed that a majority of the facilities are not conducting procedures for diagnosing TB in children; even when the children are diagnosed, the nurses in the clinics are unable to initiate TB treatment for the children. The nurses are still not comfortable providing comprehensive TB/HIV including MDR-TB care and treatment for children.
  - **Implementation of pediatric TB study** (Q2-4). After 6 months of data collection, Q4 saw the wrap-up of the pediatric TB study data collection at both sites (Piggs's Peak and Mbabane Government hospitals). The 400 participant sample size was exceeded, and 400

interviews were successfully conducted with caregivers to determine their perspectives on the pediatric sample collection methods. All collected demographic and other variables data were entered by a data clerk, and lab results data were double entered to ensure quality. Data have been cleaned and securely stored and will be analyzed in full in the first quarter of FY15 with assistance from headquarters. Qualitative data have been entered and cleaned and results were presented at the National Health and Research Conference in October 2014.

- **Strengthen infection prevention and control (IPC).**
  - **The project supported and coordinated three Quality Assurance Infection Prevention and Control (QAIPC) TWG workshops over the year.** The objectives of these meetings were to review progress on IPC national workplan, validate the IPC manual for HCWs, and review performance on national IPC indicators.
  - **66 TB diagnostic clinics have received clinical mentoring on implementing infection control** through providing disposable masks for all patients, highlighting the open window policy and implementing the Find TB Actively Separate Safely and Treat (FAST) strategy. Information, education, and communication (IEC) materials for TB infection control have been distributed. An assessment of the Mbabane Government Hospital was conducted.
  - **The projected established a program to improve TB IPC and HIV sensitization among public transport operators.** The initial workshop conducted on March 5, 2014 aimed to provide basics of TB and raise awareness on employee wellness issues pertaining to TB. An official national launch was conducted in September 2014 with involvement of the Ministry of Health and other stakeholders.
  - **IPC Focal Persons Training** (Feb 3-7, 2014). This training was attended by 36 representatives from the MOH and other health facilities. The key objective of the training was to capacitate health care workers on infection prevention control issues by improving their skills and knowledge.
  - **Facilitated training of pharmacists, QA and IPC focal persons from six hospitals on locally preparing the alcohol hand rub** (April 15, 2014).
  - **Feedback session for IPC focal persons post IPC basic** training was held on April 23, 2014. The participants of the basic IPC training gave feedback and shared experiences on the project assignment which was given at the end of the class session. Present were IPC focal persons were from 15 facilities.
- **Health care workers' TB screening project** (September 22-24, 2014). Nine participants from the new wellness clinics attended the three-day training which covered TB screening, the 3Is, DOTS, quality assurance, and monitoring and evaluation. The participants developed and presented work plans to be implemented at their respective facilities. A two-day data reporting meeting was also held during September 25-26, 2014 for the facilities that participated in the pilot. Facility-specific work plans were developed.

RESULTS

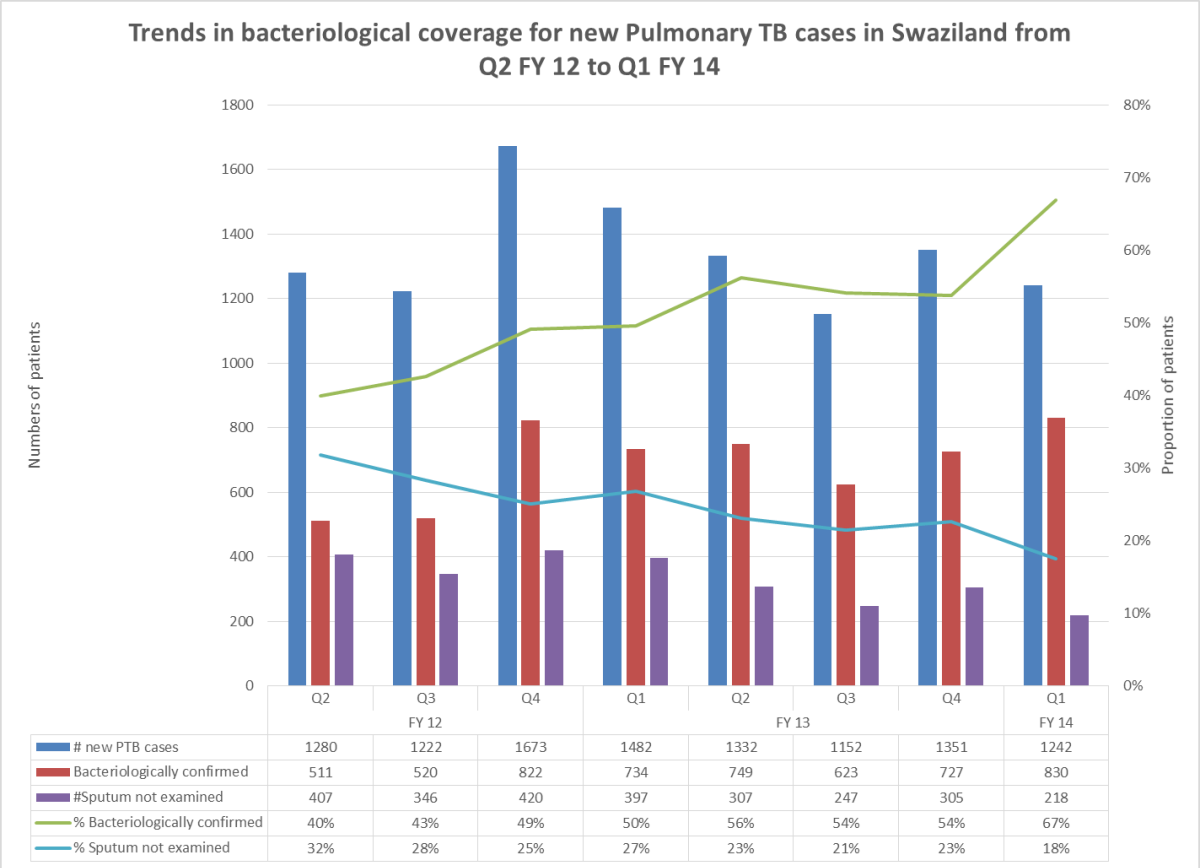
Improvement in Key Indicators

Activity	Indicators	Baseline (Sept 2013)	Value (Dec 2013)	Value (Mar 2014)	Value (June 2014)	Last Value (September 2014)
Implement high quality DOTS expansion for TB & MDR-TB and strengthen implementation of integrated	TB case notification	1782	1341	1208	1137	1324
	TB treatment success rate	77%	77%	80%	81%	78%
	HTC uptake	96%	96%	95%	95%	97%

Activity	Indicators	Baseline (Sept 2013)	Value (Dec 2013)	Value (Mar 2014)	Value (June 2014)	Last Value (September 2014)
TB/HIV prevention, care, and treatment	CPT uptake	98%	99%	99%	99%	99%
	ART uptake	69%	72%	84%	76%	77%
	MDR-TB case enrolment	76%	70%	75%	TBD	TBD
	MDR-TB 6 months interim outcome	68%	73%	80%	53%	TBD
	MDR-TB Treatment success rate	59%	57%	58%	49%	TBD

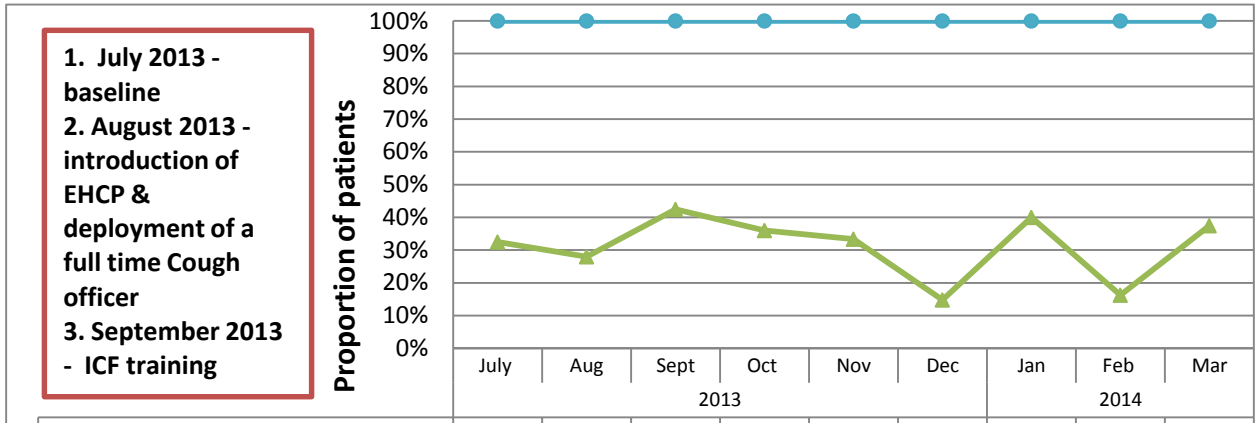
- **Increased case detection of TB.** ASSIST supported the NTCP to ensure that clinics have access to quality assured bacteriology. This has contributed to the improvement in bacteriological coverage for all newly registered TB patients (Figure 36).

Figure 36: Swaziland: Improving TB case detection through improving bacteriological coverage (Q2 FY12-Q1 FY 14)



- **Strengthened TB screening and case detection among exposed infants atone of the model clinics.** During the reporting period, infants exposed to tuberculosis were prioritized for TB screening (Figure 37).

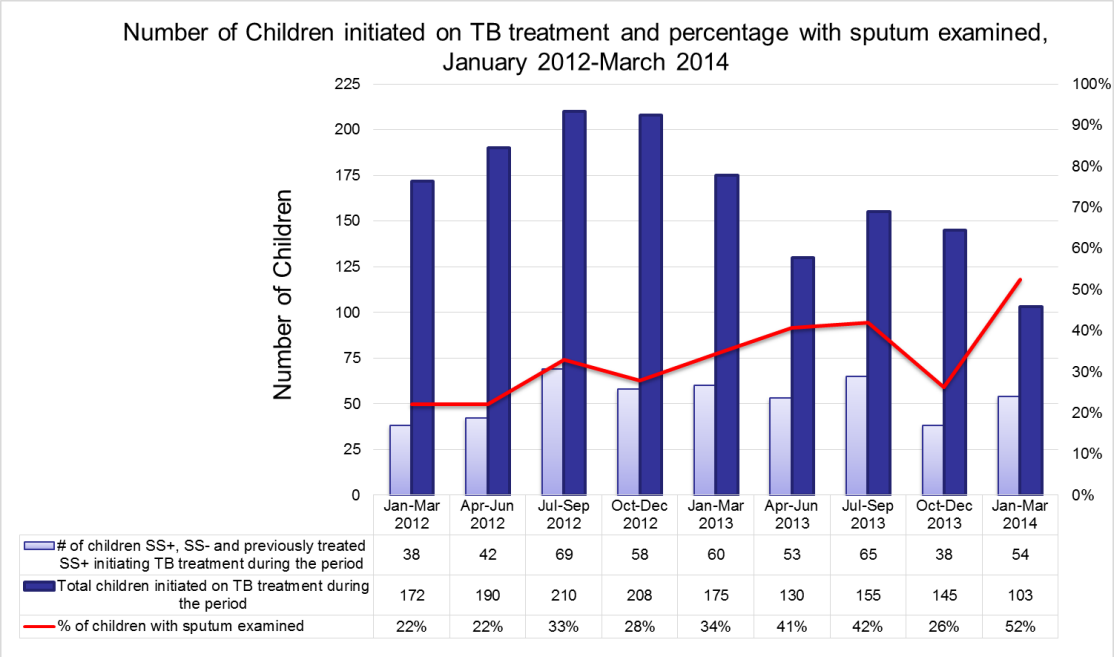
Figure 37: Swaziland: TB screening of exposed infants at 6-8 weeks (July 2013 – March 2014)



	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar
Total # of infants seen at 6-8 weeks	37	25	33	25	15	27	35	37	32
Total # of HIV exposed infants seen at 6-8 weeks	12	7	14	9	5	4	14	6	12
Proportion of HIV exposed infants seen at 6-8 weeks	32%	28%	42%	36%	33%	15%	40%	16%	38%
Total # of HIV exposed infants screened for TB	12	7	14	9	5	4	14	6	12
Proportion of HIV exposed infants screened for TB	100%	100%	100%	100%	100%	100%	100%	100%	100%

- **Increased number of children initiated on TB and sputum examined.** Technical support was provided to integrate pediatric TB screening into school health; maternal and child health; and integrated management of childhood illness policies. A TB symptom screening tool was integrated in the child health card and trainings have been conducted on improving diagnosis of TB in children using induced sputum or gastric aspirates. Results of these efforts are shown in Figure 38.

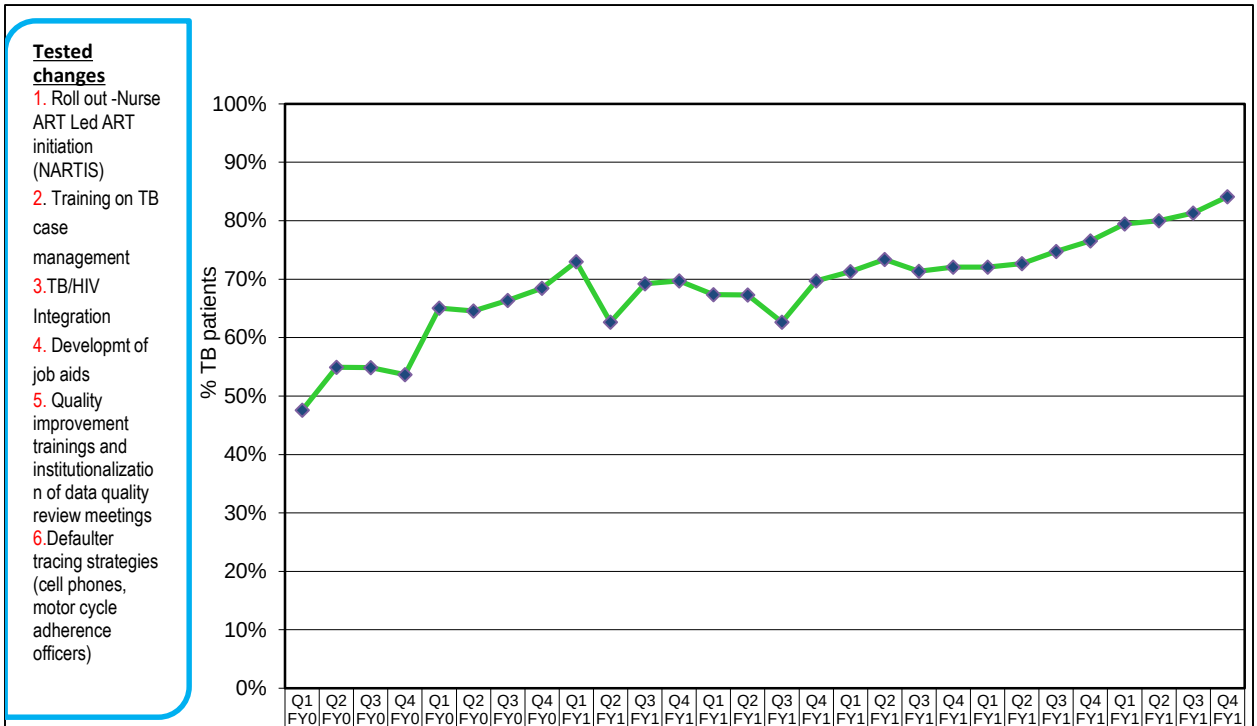
Figure 38: Swaziland: Number of pediatric TB cases with sputum examined (Q2 FY12- Q2 FY14)



	Jan-Mar 2012	Apr-Jun 2012	Jul-Sep 2012	Oct-Dec 2012	Jan-Mar 2013	Apr-Jun 2013	Jul-Sep 2013	Oct-Dec 2013	Jan-Mar 2014
# of children SS+, SS- and previously treated SS+ initiating TB treatment during the period	38	42	69	58	60	53	65	38	54
Total children initiated on TB treatment during the period	172	190	210	208	175	130	155	145	103
% of children with sputum examined	22%	22%	33%	28%	34%	41%	42%	26%	52%

- **Improved TB case finding and treatment success rate.** Ongoing clinical mentoring and supporting of quality improvement projects has seen the improvement in TB treatment success from 48% in FY08 to 81% in Q3 FY14 (Figure 39). However an ongoing decline in TB case finding is noted.

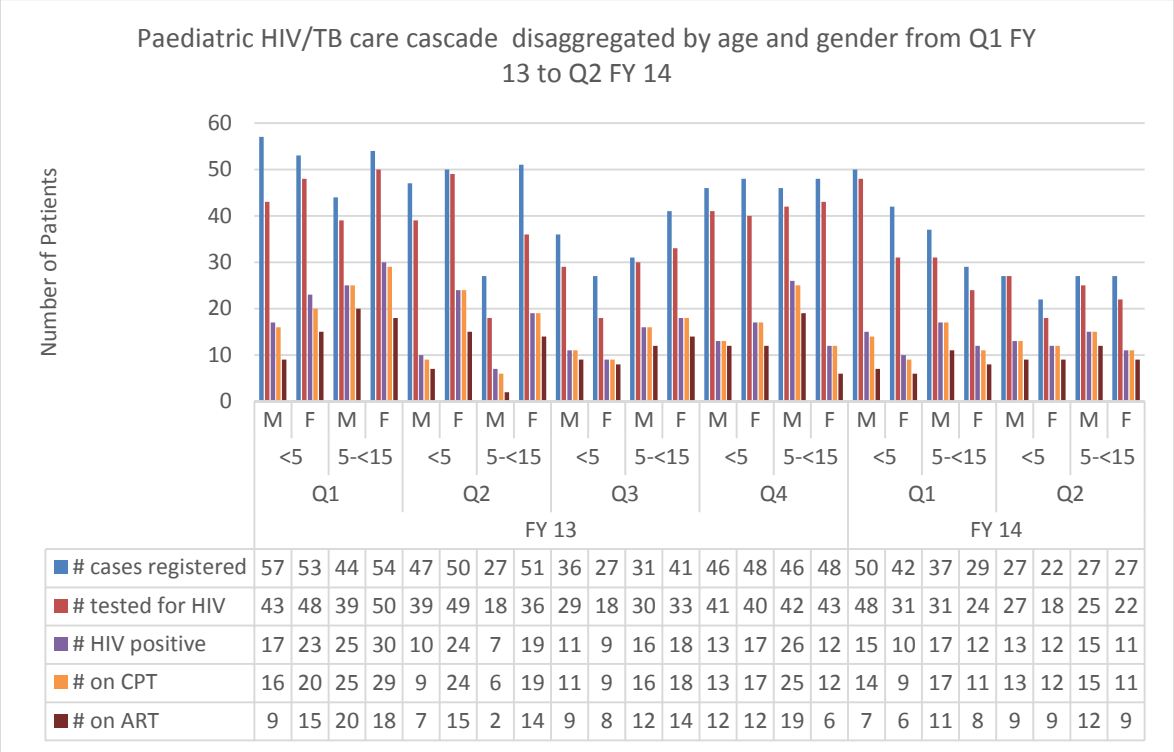
Figure 39: Swaziland: Trends in National TB treatment success rates (Q1 2008 – Q4 2014)



	Q1 FY08	Q2 FY08	Q3 FY08	Q4 FY08	Q1 FY09	Q2 FY09	Q3 FY09	Q4 FY09	Q1 FY10	Q2 FY10	Q3 FY10	Q4 FY10	Q1 FY11	Q2 FY11	Q3 FY11	Q4 FY11	Q1 FY12	Q2 FY12	Q3 FY12	Q4 FY12	Q1 FY13	Q2 FY13	Q3 FY13	Q4 FY13	Q1 FY14	Q2 FY14	Q3 FY14	Q4 FY14
	FY08				FY09				FY10				FY11				FY12				FY13				FY14			
# of cases registered	683	670	596	755	833	798	717	830	815	774	864	918	934	939	1425	822	749	643	457	670	630	655	535	644	530	595	546	598
# Cured	205	244	207	254	314	381	364	418	399	344	431	521	480	482	738	358	361	304	226	344	305	350	292	359	300	361	347	373
# Completed	120	124	120	151	228	134	112	150	196	141	167	119	149	150	155	215	173	168	100	139	149	126	108	134	121	115	97	130
Treatment Success Rate	48%	55%	55%	54%	65%	65%	66%	68%	73%	63%	69%	70%	67%	67%	63%	70%	71%	73%	71%	72%	72%	73%	75%	77%	79%	80%	81%	84%

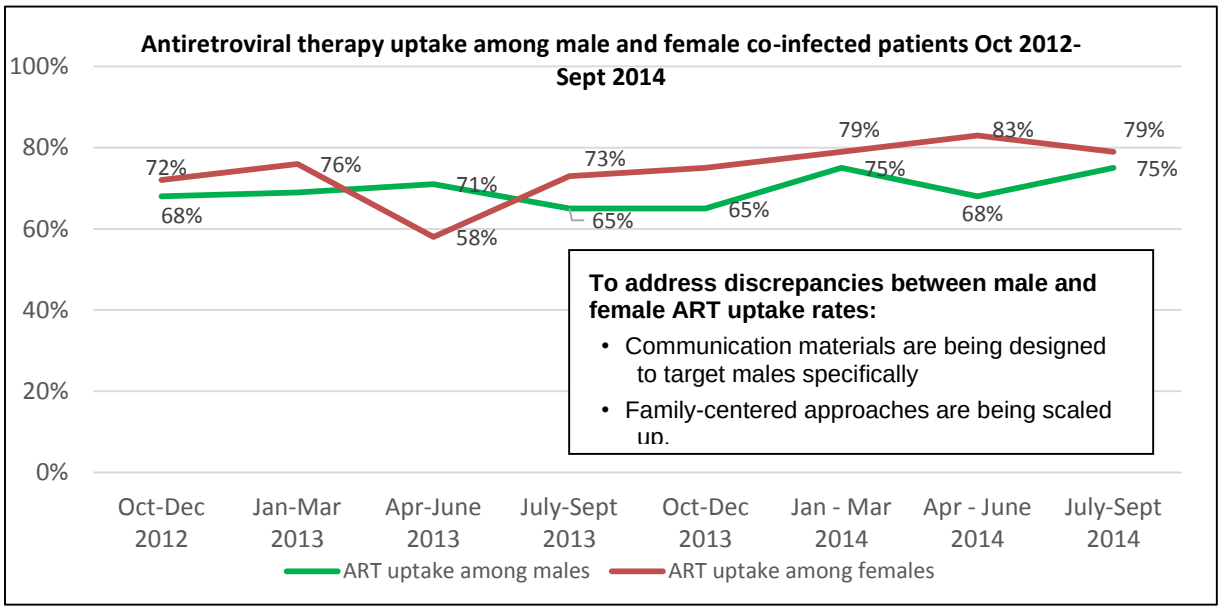
- **TB/HIV care cascade.** IPT has become a major area of intervention in the country, with ASSIST providing IPT technical assistance to both the National HIV and Tuberculosis programs. Following the IPT Indaba held in September 2013, a task group was formed to address implementation challenges. ASSIST provides technical assistance and resources to strengthen the TB/HIV care cascade in TB clinical settings. The data are disaggregated by sex and age to inform interventions that will improve TB treatment outcomes.
- Figure 40 depicts the TB/HIV care cascade among children under five, disaggregated by sex. As shown, ART and CPT uptake have improved among both boys and girls. Figure 41 shows uptake of ART among co-infected men and women; more females than males accept ART. Using a family-centered approach and male-centered health messages are interventions being piloted to address this disparity.

Figure 40: Swaziland: Comparison of CPT and ART uptake among males and females <5 years and 5-15 years of age (Q1FY13 – Q2FY14)



	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
	<5		5-<15		<5		5-<15		<5		5-<15		<5		5-<15		<5		5-<15		<5		5-<15	
	Q1				Q2				Q3				Q4				Q1				Q2			
	FY 13																FY 14							
# cases registered	57	53	44	54	47	50	27	51	36	27	31	41	46	48	46	48	50	42	37	29	27	22	27	27
# tested for HIV	43	48	39	50	39	49	18	36	29	18	30	33	41	40	42	43	48	31	31	24	27	18	25	22
# HIV positive	17	23	25	30	10	24	7	19	11	9	16	18	13	17	26	12	15	10	17	12	13	12	15	11
# on CPT	16	20	25	29	9	24	6	19	11	9	16	18	13	17	25	12	14	9	17	11	13	12	15	11
# on ART	9	15	20	18	7	15	2	14	9	8	12	14	12	12	19	6	7	6	11	8	9	9	12	9

Figure 41: Swaziland: ART uptake among male vs. female co-infected patients by quarter (Oct 2012 – Sept 2014)

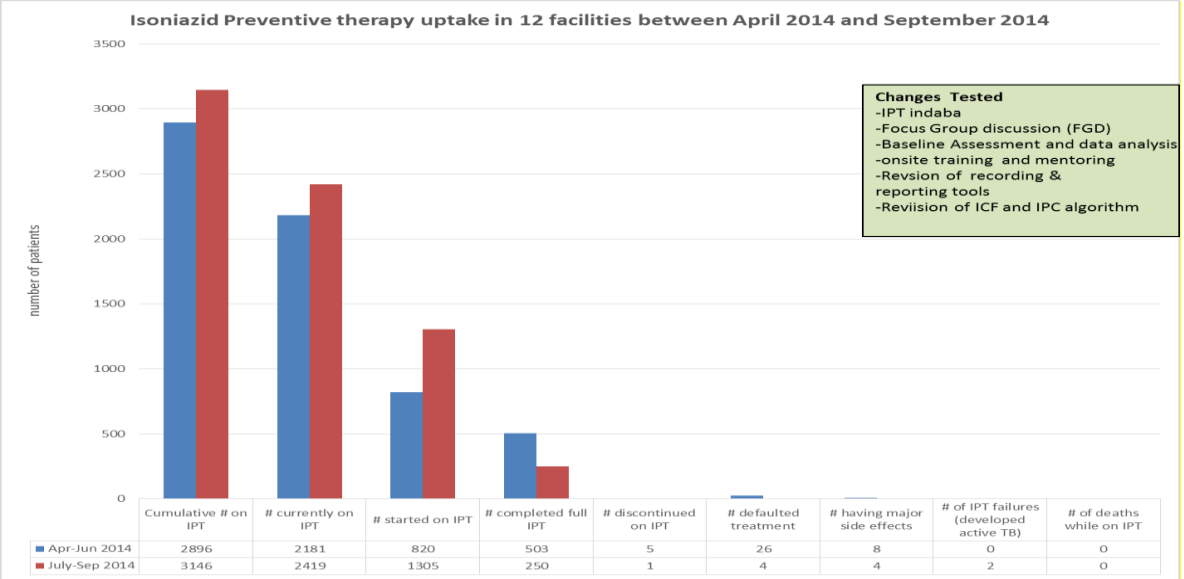


- **IPT implementation for TB prevention among PLHIV at comprehensive care centers.**

Implementation for IPT has been slow in spite of availability of IPT guidelines, isoniazid, and training of health care workers. An assessment conducted in February 2014 found that only 2% (n=90,000+) of eligible PLHIV are initiated on IPT. The main reasons were poor documentation, poor follow-up even when patients were able to honor their ART pick-up appointments, and poor communication with the central medical stores on isoniazid availability. Figure 42 shows IPT performance in 12 health

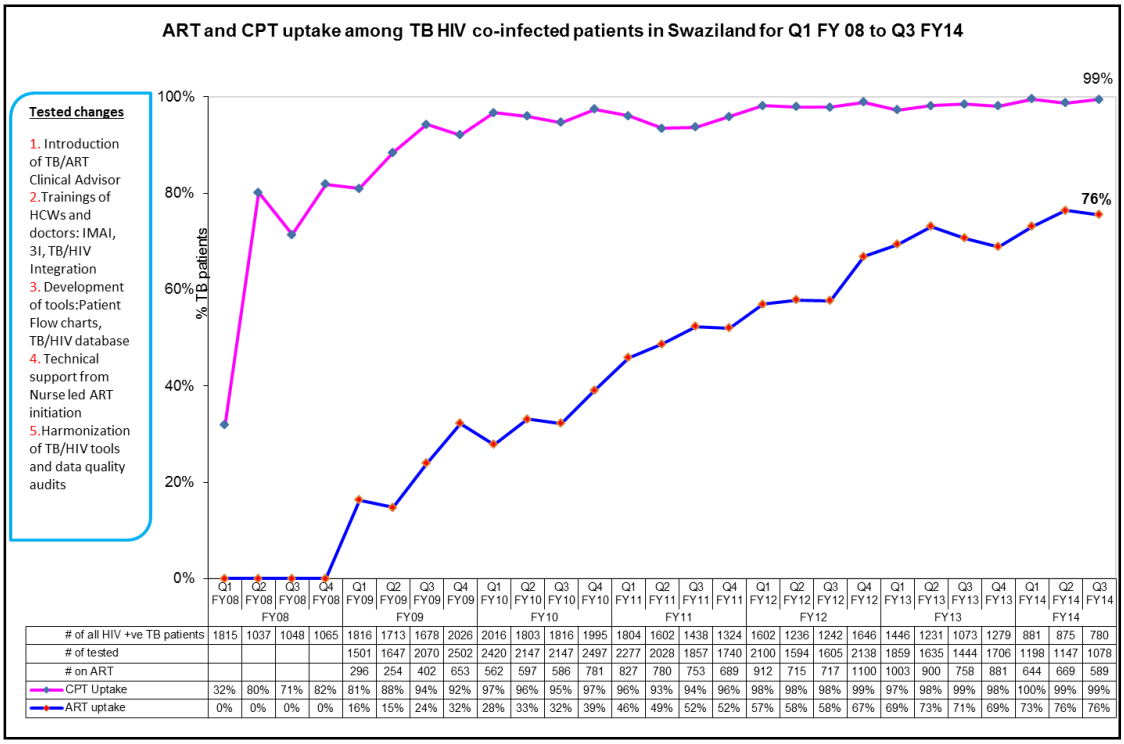
facilities supported by ASSIST. Over the last five months a number of interventions have been implemented to improve IPT uptake. In Q4 a cumulative total of 3,146 patients were on IPT, of which newly initiated accounted for 1305, and the patients who completed their treatment were 250.

Figure 42: Swaziland: Implementation of IPT, 12 health facilities (April – Sept 2014)



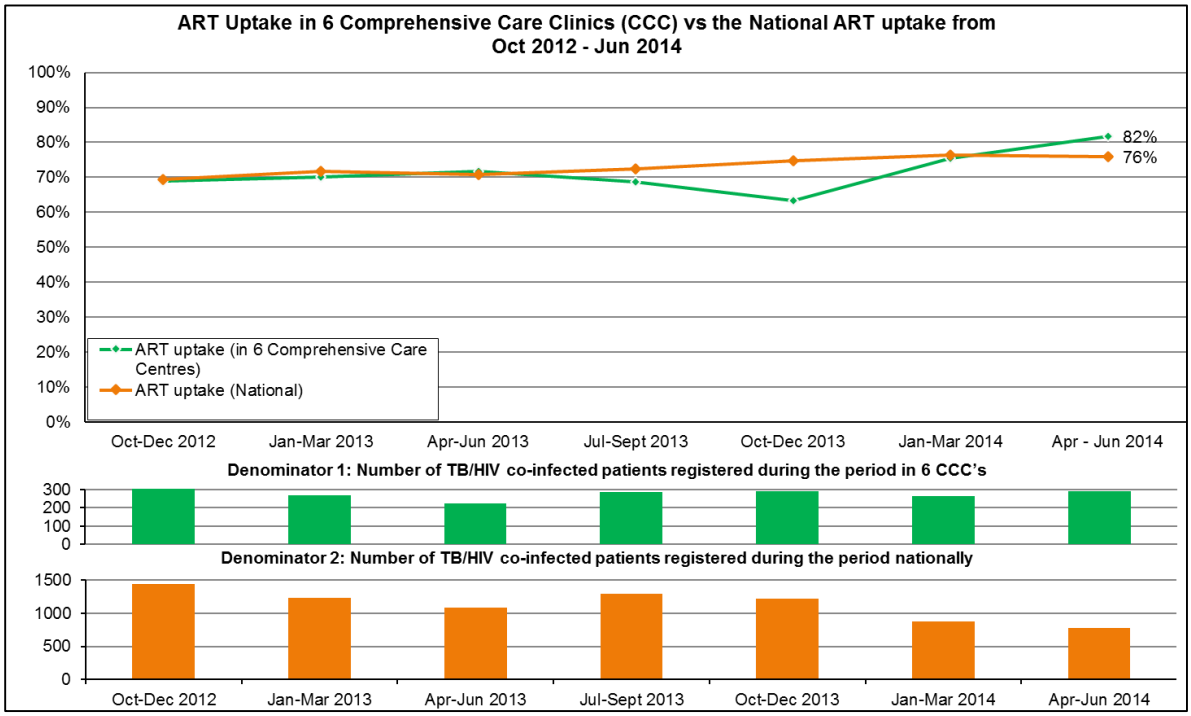
- **Increase in ART and CPT uptake.** Long-term trends of increasing ART and CPT uptake among TB HIV co-infected patients are shown in Figure 43, where ART uptake increased from 0% in Q1FY08 to 76% in Q3FY14 and CPT increased from 32% to 99% during the same time period. Figure 44 shows that ART uptake in the TB/HIV comprehensive care centers is now higher than the national rate (82% vs. 76% Q3 FY14).

Figure 43: Swaziland: Trends in CPT and ART uptake among TB/HIV co-infected patients (Q1 FY 08- Q3 FY14)



	Q1 FY08	Q2 FY08	Q3 FY08	Q4 FY08	Q1 FY09	Q2 FY09	Q3 FY09	Q4 FY09	Q1 FY10	Q2 FY10	Q3 FY10	Q4 FY10	Q1 FY11	Q2 FY11	Q3 FY11	Q4 FY11	Q1 FY12	Q2 FY12	Q3 FY12	Q4 FY12	Q1 FY13	Q2 FY13	Q3 FY13	Q4 FY13	Q1 FY14	Q2 FY14	Q3 FY14
	FY08				FY09				FY10				FY11				FY12				FY13				FY14		
# of all HIV +ve TB patients	1815	1037	1048	1065	1816	1713	1678	2026	2016	1803	1816	1995	1804	1602	1438	1324	1602	1236	1242	1646	1446	1231	1073	1279	881	875	780
# of tested					1501	1647	2070	2502	2420	2147	2147	2497	2277	2028	1857	1740	2100	1594	1605	2138	1859	1635	1444	1706	1198	1147	1078
# on ART					296	254	402	653	562	597	586	781	827	780	753	689	912	715	717	1100	1003	900	758	881	644	669	589
CPT Uptake	32%	80%	71%	82%	81%	88%	94%	92%	97%	96%	95%	97%	96%	93%	94%	96%	98%	98%	98%	99%	97%	98%	99%	98%	100%	99%	99%
ART uptake	0%	0%	0%	0%	16%	15%	24%	32%	28%	33%	32%	39%	46%	49%	52%	52%	57%	58%	58%	67%	69%	73%	71%	69%	73%	76%	76%

Figure 44: Swaziland: Trends in ART uptake in the TB/HIV comprehensive care centres vs National ART uptake (Oct 2012 – June 2014)



Activity 4. Implement advocacy and social mobilization interventions to improve HIV and MDR-TB services uptake and outcomes

KEY ACCOMPLISHMENTS

- **Worked to strengthen the capacity of NTCP to develop and implement a TB advocacy, communication, and social mobilization (ACSM) strategy** (Q1). An initial draft of the ACSM strategy was developed in Q1 in conjunction with the STOP TB partnership in Swaziland. In September 2014, ASSIST, in partnership with NTCP and WHO, conducted a workshop to develop a TB ACSM strategy. The strategy focused on communication that seeks to go beyond raising awareness and has behavioral impact on the communities reached.
- **Developed, printed and distributed IEC materials and job aids on TB, TB/HIV and MDR-TB** (Q2). Printing and distribution of IEC materials - poster, banners, pamphlets, stickers, and promotional materials - were produced and distributed to encourage stopping the spread of TB as well as identifying the estimated missed 7000 TB cases in the country which need to be found, treated, and cured.
- **Conducted community mobilization/TB awareness and sensitization activities.**
    - **Conducted visits to schools, prisons, mines, military, and the police where health education and screening was provided**. In Mhlume High School in the Lubombo Region (Q1-Q2), 700 pupils received health education, and 158 children and teachers were screened for TB. Focusing on prisons, two days after the actual commemoration of World TB Day, Bhalekane Prison Farm hosted a TB Day for over 300 offenders and 50 warders.
    - **Successfully mobilized Malkerns' community members** (Q2). The activity started off with a march followed by TB education and screening. A total of 350 people visited set-up stalls, and 539 IEC materials were disseminated. By the end of the day, 213 people were screened for TB, and 95 out of the group tested positive to the screening tool.
    - **Held community dialogues in Mamisa Chiefdom in Shisewleni Region** (Q2). These targeted traditional leaders who are normally the driving force in communities. The community leaders were sensitized on TB and were willing to advocate for TB initiatives in

their community by encouraging people to screen for TB and seek for treatment in health facilities.

  - **Supported community mobilization for the elderly**. ASSIST supported this event which was specifically held for the elderly women on the outdoor premises of the Ngowane Clinic (Q3). This activity themed "Shukuma Gogo" (which means "Move Granny") managed to reach a total of 60 participants ages 59-89 years. Health education sessions on TB , MDR-TB, TB/HIV, NDCs, diabetes, and hypertension were conducted. All participants were screened for TB and of those screened, 16 tested positive for TB on the symptom-based screening tool. TB and IPC IEC materials were distributed.
  - **Conducted community dialogues and focus group discussions with regional health motivators** (Q4)**.** In September 2014, the ASSIST Project conducted community health days in 11 communities. In total, 851 regional health motivators attended, 389 were tested for HIV, and 8 tested positive for HIV. During the health days, focus group discussions were conducted with regional health motivators and community leaders to collect data on the roles played by motivators in the 11 communities.
  - **Conducted TB health education campaign at St. Joseph's Primary School** (September 19, 2014). 85 children (40 males and 45 females) ages 10-17 years were sensitized and screened for TB. Of those screened 22 were positive using the screening tool and were referred to St. Juliana Clinic.
  - **TB screening at Maloma Mines in collaboration with URSA**. 140 miners were screened for TB, and of these, 35 are ex-miners from South African mines. Of those screened, 48 screened positive for TB, and 12 of these were ex-miners from South Africa. Spot sputum was collected from miners who had a positive result for GenXpert testing at the national laboratory. The mine clinic nurses have recently been trained by NTCP to initiate TB treatment, and the clinic is being prepared for accreditation as a TB initiating site.
  - **Conducted TB screening and dissemination of behavioral change communication (BCC) materials at the Swaziland International Trade Fair** (Q4). ASSIST in collaboration with URSA took advantage of the Trade Fair to promote and sensitize the public on TB issues. On the days where the teams were at the stalls a total of 70 people were reached. More people visited the stall collecting BCC materials.

- **Held performance feedback session with 14 health care workers** (May 6, 2014, Mpolonjeni Clinic) in Hhohho Region. The feedback session helped the team members to reflect on their performance, realize their performance gaps as a facility and determine which areas they need to improve in their facility.
- **Participated in International Nurse's Day** (May 12, 2014). The nurses association and the ASSIST teams commemorated the day by providing free health services to the public in the Mbabane City Centre. The services ranged from HIV testing, basic medical check-ups, and TB screening. Sixty-seven people were screened for TB. Thirty people screened positive for TB were referred to the Mbabane Government Hospital for further management. By the end of the day, 294 BCC materials on basic facts of TB, the TB smart card, and MDR-TB were distributed.
- **Kick TB Campaign.** ASSIST collaborated with the MOH and NTCP in the Kick TB Campaign during June 2014 which was both the men's health month and the FIFA world cup month in Brazil. In the campaign, ASSIST provided educational materials and radio spots on TB prevention, treatment adherence, and care.
- **Drafted and finalized the Patient Charter.** The Patient Charter was drafted in collaboration with the NTCP. The information included was guided by the WHO Patient Charter; however it was amended to suit the context of the country.
- **Launched TB IPC awareness in the public transport industry** (Q4)**.** Sixty participants attended along with the MoH Deputy Director for Public Health. This activity included TB awareness campaigns in the four regional bus lines to sensitize the public on the basic facts of TB/HIV, TB IPC, and non-communicable diseases.

Activity 5. National Framework for In-service Training (IST)

KEY ACCOMPLISHMENTS

- **Presented the IST improvement framework to stakeholders** (Q2), including the Human Resources for Health technical working group (HRH TWG), the Nursing Council, program managers, PEPFAR partners, NGOs, training institutions, and IST coordinators. As a result, the core IST improvement activities were included in the HRH TWG work plan.
- **Development of the in-service training coordination mechanism.** In June 2014 ASSIST held a workshop to draft a mechanism for coordinating IST in the country. The mechanism provides ten steps for developing a calendar which is a tool for coordination of training among HCW training providers, guidelines for approval of both planned and unplanned training, and key players and their roles in coordination of training.
- **Conducted two 3-day trainings in IST quality improvement (training best practices, orientation to the IST policy, and orientation to the IST improvement framework)** (Q3). The purpose of the workshop was to familiarize facility IST coordinators and managers on concepts of quality improvement and its application to improving IST effectiveness and efficiency. Thirty-four IST quality improvement plans were developed by participants for their facilities.
- **ASSIST provided mentorship and technical assistance during the implementation as follow-up to these quality improvement plans.** Provided technical support during the development of training manuals (e.g., injection safety and medical waste management, infection prevention and control). Facilitated sessions during the quality improvement training of trainers to improve the competence of trainers.
- **Drafted IST coordination commentary** (Q3-4)**.** In an effort to learn from other countries globally on improving IST coordination, ASSIST wrote a commentary with an aim of calling upon countries, organizations, and development agencies to share IST coordination best practices, experiences, and models.
- **Conducted IST baseline survey** (Q2-3). ASSIST developed baseline assessment tools and carried out the survey in the four regions of Swaziland targeting IST service providers such as the MOH public health programs, training institutions, and the technical assistance partners. Key results showed that out of the 47 training providers; 34% rarely conducted a training needs assessment; 50% did not conduct training evaluations; 65% rarely engaged pre-service training providers to ensure consistency in content, approach, and methods; and 53% did not have a system to track trainees, which might have led to training the same health care workers twice.
- **Development of standard training record tools** (Q4)**.** In order to improve the tracking of trainings for health care workers and the training information management system in general, training recording tools were developed in September 2014.
- **Provided technical assistance in the quality management training of trainers** (Q4) where selected trainers were trained to conduct quality improvement/quality assurance training at regional level.

SUSTAINABILITY AND INSTITUTIONALIZATION

ASSIST is building the capacity of the Ministry of Health Quality Assurance Program, NTCP, and SNAP managers at the central level to conduct QI planning, implementation, and evaluation and building the capacity of frontline health care workers and QI mentors in health facilities throughout the country to improve the quality of TB-HIV services and improve health care performance measurement at national, regional, and health facility levels.

The pilot and scale-up of the coordination mechanism for IST is targeting the three priority MOH public health programs that have the highest volume of trainings: National TB Program, Swaziland National AIDS Program, and the Sexual and Reproductive Health Unit. Once these MOH program take up the IST coordination mechanism supported by ASSIST, lessons learned from the pilot will be institutionalized in those programmes, adopted as a national strategy, and spread to the other training providers within the MOH and among partners.

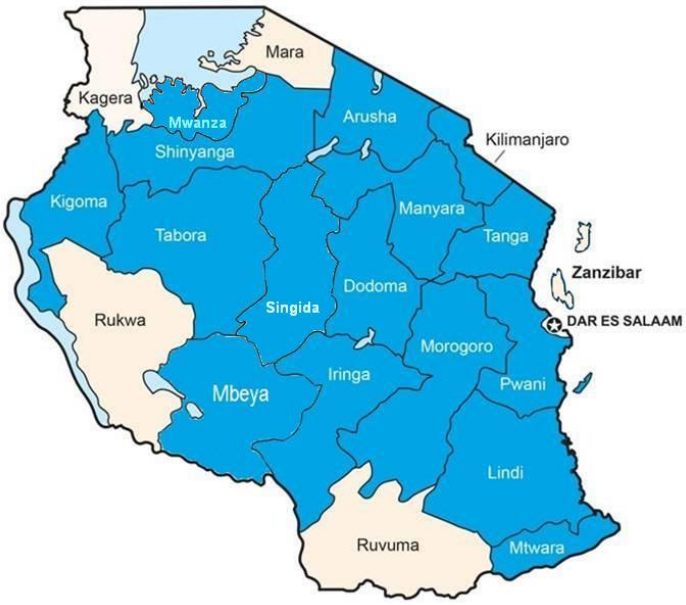
TANZANIA

BACKGROUND

USAID ASSIST was invited by the USAID Mission in Tanzania to continue supporting the Ministry of Health and Social Welfare (MOHSW) and PEPFAR ART/PMTCT implementing partners in building capacity to improve quality of care. This work builds on activities begun under HCI in 2008. ASSIST supports activities geared to strengthening access to, retention, and effectiveness of ART/PMTCT care; services and protection of most vulnerable children (MVC); and community-based services. Furthermore, as part of Partnership for HIV-Free Survival (PHFS), ASSIST is supporting activities aimed at eliminating HIV infection in children and reducing deaths among HIV-infected mothers, including national scale-up of PMTCT Option B+. Other technical areas addressed by ASSIST include support to Tanzania's efforts to improve the quality of ART care for infants and children exposed or infected with HIV.

ASSIST's approach in Tanzania is to build the capacity of Regional Health Management Teams (RHMTs) and Council Health Management Teams (CHMTs) to coach and mentor facility-based improvement teams. These teams in turn test changes that will improve access and retention in HIV care, improve management of TB/HIV co-infection, improve adherence to antiretroviral drugs, and improve nutritional care for HIV-positive mothers and exposed infants.

Scale of USAID ASSIST's Work in Tanzania



MOHSW, 11 IPs

376 facilities

147 communities

575 Quality Improvement Teams

19.6 out of 45 million

ASSIST supported regions -**HIV/AIDS (including OVC)**

PROGRAM OVERVIEW

Activities	What are we trying to accomplish?	At what scale?	Improvement Activity	Activity
1. Support the MOHSW and PMTCT implementing partners to scale up programs providing	• To improve access to HIV prevention, testing, care treatment and support	New learning sites: Mwanza 29/33, Singida 35/35; Mbeya and Dodoma – 10 sites in one district each.	x	

	women and their families improved access to HIV prevention, testing, care, treatment and support through quality improvement approaches along the PMTCT cascade	• To improve optimal ARV care for mothers and infants attending post-natal care • To support the MOHSW, IPs, and stakeholders to design, test, and adopt performance benchmark and standards for effective implementation of option B+ • To support MOHSW, RHMT/CHMT to improve early infant diagnosis among HIV-exposed children in Mbeya urban	Existing Sites: Lindi: 15 out of 98 sites, Mtwara: 20 out of 83 sites, Kilimanjaro: 13/256 sites, Iringa 37/176 sites, Manyara: 8 out of 135 sites, Njombe: 10 out of 186 sites, Tanga: 8 out of 340 sites, Shinyanga: 14 out of 310 sites, Tabora: 15 out of 171 sites, Morogoro: 49 out of 64 sites		
2.	Support the MOHSW towards elimination of HIV infection in children and reducing deaths among HIV-infected mothers as part of the Partnership for HIV-Free Survival	• To improve optimal ARV care for mothers and infants attending post-natal care • To improve retention all mother-infant pairs in post-natal care regardless of their HIV status • To improve monitoring of well-being of HIV-positive mothers attending post-natal services and their infants • To improve provision of optimal nutritional care for mother-infant post-natal care at the health facility and community level	3 out of 26 regions of Tanzania (Tabora, Iringa and Mbeya) 1 district in each of the 3 regions (Nzega, Mufindi and Mbeya Municipal) 10 sites in each of the 3 districts	x	
3.	Support the MOHSW and IPs to scale up improvement activities for ART services to achieve sustainable patient coverage, retention, and clinical outcomes	• To support MOHW, RHMT/CHMT and IP to scale up HIV/AIDS care improvement to 4 new regions	Mwanza 29/33, Singida 35/35; Mbeya and Dodoma – 10 sites in one district each. Existing Sites: Lindi: 15 out of 98 sites, Mtwara: 20 out of 83 sites, Kilimanjaro: 13/256 sites, Iringa 37/176 sites, Manyara: 8 out of 135 sites, Njombe: 10 out of 186 sites, Tanga: 8 out of 340 sites, Shinyanga: 28 out of 310 sites, Tabora: 15 out of 171 sites, Morogoro: 49 out of 64 sites Arusha: 25 out 110	x	
		• To provide TA to MOHSW, RHMTs, and CHMTs in integrating essential services with ART program • To strengthen follow-up of ART patients for better retention and clinical outcomes	Morogoro - 49 out of 64 sites Shinyanga - 28 out of 310 sites Iringa - 20 out of 37 sites Njombe - 10 out of 186 sites Lindi - 15 out of 98 sites Mtwara - 20 out of 83 sites Kilimanjaro - 13 out of256 sites Manyara - 8 out of 135 sites Tabora - 15 out of 171 sites Tanga – 8 out of 340 sites		
		• To test changes to improve care-patient centeredness	14 facilities in Morogoro urban and rural		

4. Support the MOHSW, MVC, IPs and local structures to strengthen quality of care, support and protection to MVC through improvement approaches	• To support the Department of Social Welfare (DSW) of the MOHSW and MVC IPs in improving and strengthening the MVC care response system	Child Protection Model District - Mkuranga: 124 MVCC/CP team members from 3 wards with 24 villages trained on child protection and improvement approaches	x	
5. Work with the MOHSW and stakeholders to develop a community home-based care (CHBC) quality improvement program and monitoring framework and support country-wide scaling up	• To support the Department of Social Welfare of the MOHSW and MVC IPs in improving and strengthening the MVC care response system	National 3 out 24 wards in Bagamoyo District	x	
	• To support the DSW, LGAs, and IPs in developing a comprehensive MVC care and protection framework • Implement a comprehensive MVC care package addressing child protection needs i.e., violence, abuse, neglect in a model district	3 wards in Mkuranga District		
6. Support the MOHSW and partners to develop, field test and scale up national Quality Improvement Framework for PMTCT Option B+	• Support the MOHSW, IPs and stakeholders to design, test and adopt performance benchmark and standards for effective implementation of Option B+	National	x	
	• Support the MOHSW, IP and stakeholders to design, test tools for facilitation of implementation of a coordinated and integrated PMTCT option B+ strategic approach at district level • Support field testing of the common PMTCT Option B+ improvement plan in one model district in Mwanza	10 facilities in one district of Mwanza Region		
7. Support MOHSW and IPs to improve the quality of ART care for infants and children exposed or infected with HIV	• To support MOHSW, RHMT/CHMT to improve early infant diagnoses among HIV exposed children and testing of HIV among non-exposed children in four regions	All 23 districts in 4 regions of Tabora, Shinyanga, Iringa, and Njombe All high-volume health facilities in each district (40 sites) Now working with about 40 QI teams	x	
	• To improve pediatric ART treatment initiation			
	• To strengthen follow-up of pediatric ART patients for better clinical and immunological monitoring			
	• To strengthen retention and outcome of HIV infected infants and children in four regions			

KEY ACCOMPLISHMENTS

Activity 1. Support the MOHSW and PMTCT implementing partners to scale up programs providing women and their families improved access to HIV prevention, testing, care, treatment, and support through quality improvement approaches along the PMTCT cascade

KEY ACCOMPLISHMENTS

- **Iringa District Council scale-up sites: All scale up sites except one have switched to Option B+, and ART services are integrated at the Reproductive and Childr Health (RCH) clinic. In Iringa District Council, the 13 scale-up sites initiated QI implementation through:**
  - Strengthening health education at RCH on: Importance of HIV-positive mothers to use ARVs for prophylaxis or for lifelong treatment; and HIV-positive pregnant women to bring back their babies for postnatal care where they will be linked to child follow-up until their HIV status is determined.
  - Linking with village leaders and facility board members to advocate for early ANC booking and for men to escort their female partners for ANC. Sites are using home-based care (HBC) providers to track HIV-exposed infants (HEI) who do not turn up for results. Some Option B+ sites with site-based care and treatment centers (CTC) are practicing to enter PMTCT clients' information daily to the data base to minimize losing data. Some facilities have initiated interfacility linkages where they can borrow reagents, ARVs, or other supplies at times of shortages and use ledger books to record supplies given or received from other facilities. One facility tried on the job peer training on dried blood spot (DBS) testing and observed an increased number of children receiving DBS tests.
- **Iramba District, Singida Region: Conducted baseline assessment and learning session** (Q2).
  - A baseline assessment was conducted at six facilities of Iramba District. The findings revealed that only Kiomboi was implementing QI activities with support from JICA. Implementation of PMTCT Option B+ had started at the district hospital, while the other facilities were waiting for ARVs to start treatment. There was shortage of HIV test kits (rapid & DNA/PCR) and drugs for opportunistic infections (e.g., Cotrimoxazole and ARVs for pediatric clients). There was inadequate post-natal follow up of HIV-positive mothers and babies and weak community linkages. Documentation is a big problem in all the facilities assessed, and in some facilities, PMTCT and provider-initiated HTC (PITC) registers were not in place.
  - The first learning session was conducted for all 35 facilities in the district. The teams agreed to focus on improving: Early ANC booking (before 12 weeks of pregnancy); couple testing at RCH; uptake of lifelong ART for HIV-positive pregnant and breast feeding women; pediatric PITC; Cotrimoxazole uptake among HIV-exposed infants; integration of HIV and FP services at RCH; integration of TB and HIV services; postnatal follow up of HIV-postive mother-baby pairs; and supply chain management for HIV test kits, CD4 reagents, ART for PMTCT, and Cotrimoxazole.
  - Conducted coaching visits to Iramba District, reaching 32 facility teams (April 2014).
  - Supported IP staff (1), RHMTs (2), and CHMTs (5) to provide coaching and mentoring to 58 health care providers in 35 sites of Iramba District (Q4).
- **Lindi Region: Held learning session** (March 2013). Two RHMT members, eight staff from the Elizabeth Glaser Pediatric AIDS Foundation (EGPAF), and members from nine health facilities in Lindi participated in a learning session organized by EGPAF. ASSIST was invited to provide TA on reviewing QI indicators, facilitating experience sharing among teams, development of improvement changes, and testing changes. ASSIST also supported training on improvement and its dimensions. Teams agreed on the following new priority areas for improvement: Uptake of lifelong ART for HIV-positive pregnant and breast feeding women; early infant diagnosis of HIV; couple testing at RCH; TB and HIV service integration; HIV and FP service integration at RCH;

postnatal follow up of HIV-positive mother-baby pairs; PITC for pediatric clients and adults receiving in-patient and outpatient department services; and supply chain management of commodities.

- **Mtwara Region: Conducted indicator review** (March 2014). ASSIST conducted an indicator review meeting in the Mtwara Region with regional ART &PMTCT IPs (three from EGPAF and one from Tanzania Health Promotion Services -THPS), two RHMT members, five CHMT members and 44 QI team members from eight collaborating facilities in the region. The teams shared QI implementation progress and reviewed clinical indicators to accommodate PMTCT Option B+, pediatric indicators, and TB/HIV services integration. Ten indicators were selected to monitor performance over time.
- **Kilimanjaro region: Conducted third learning session** (Q1). The learning session was attended by four RHMT members, nine CHMT members, nine staff from EGPAF, and 60 health care workers. The facilities shared progress and agreed on the indicators to be monitored and those to be added as a result of Option B+.
- **Iringa Region:**
  - **Conducted end line assessment for AIMGAPS** (Feb 2014). The qualitative and quantitative assessment was conducted in four districts, with Regional and District RCH Coordinators participating. The qualitative component focused on obtaining perspectives of services from: clients, providers, and community QI teams. In-depth interviews were conducted with 11 service providers and 32 clients. Members of community QI teams from 11 villages implementing the community component of AIMGAPS were involved in focus group discussions to gain their insights on involving community groups to improve PMTCT service uptake and retention. The quantitative component entailed retrospective data collection from 543 client records to determine services received by HIV-positive women during ANC, labor and delivery, postnatal care, and child follow-up.
  - **Conducted harvest meeting to 11 facility quality improvement teams** (May 2014). Facilitators included: 22 QI team members, 4 District RCH Coordinators (DRCHCOs), the Regional Reproductive and Child Health coordinator, and Monitoring and Evaluation officer from MOHSW. Participants documented, rated, and aggregated tested changes around eight domains of PMTCT care: access to care; provision of ARVs and cotrimoxazole supply chain; infant feeding; early infant diagnosis (EID); retention to care; community linkages; quality improvement; and data use. Identified high-ranking tested changes included: on-job training and orientation of service providers on proper documentation, group and individual counseling, and supplies and logistics management of ARVs/ART.
- **Arusha Region** (June 2014): ASSIST was invited by EGPAF to provide TA to the learning session for the PMTCT/ART collaborative sites in the Arusha Region. Seven EGPAF staff and two RHMT were coached on how to carry out experience sharing and learning sessions for new improvement teams. 25 sites with a total of 77 participants were trained in two parallel sessions of which 12 participants were CHMTs. This learning session enabled scaling up ART/PMTCT QI to 10 new sites in the region.

RESULTS

Improvement in Key Indicators

Activity	Indicator	Baseline	Current Value
1. To support the MOHSW and PMTCT implementing partners to scale up programs providing women and their families	% of pregnant women tested and counselled for HIV during ANC period in Magu District, Mwanza	63% (August 2013; 11 sites)	76% (May 2014; 11 sites)
	% HIV-positive pregnant and breast feeding women who receive ARVs treatment for PMTCT and their health in Singida Region	0% (Oct. 2013; 6 sites)	100% (July 2014; 6 sites)
	% HIV-positive women (pregnant and breast feeding)	27% (Jan	66% (May

Activity	Indicator	Baseline	Current Value
improved access to HIV prevention, testing, care, treatment and support through quality improvement approaches along the PMTCT	receiving lifelong ART for PMTCT and for their health, Lindi Region	2014; 6 sites)	2014; 6 sites)
	% male partners tested and counselled for HIV in Arusha Region	30% (Jan 2014; 18 sites)	45% (July 2014; 18 sites)
	% women from ANC who bring partner in for HIV testing in Kilimanjaro Region	16% (Sept 2011; 13 sites)	47% (Aug 2014; 13 sites)
	% of male partners tested and counselled for HIV in Singida Region	37% (Oct 2013; 19 sites)	72% (July 2014; 19 sites)
	% of pregnant women who book for first ANC by 12 weeks in Singida Region	6% (Oct. 2013; 20 sites)	16% (July 2014; 20 sites)
	% HIV clients on ART with follow-up CD4 testing (12-month cohort) in Kilimanjaro Region	30% (Jan 2013; 12 sites)	52% (Aug 2014; 12 sites)
	% of eligible HIV-positive women of reproductive age receiving family planning methods in Arusha Region	27% (Jan 2014: 13 sites)	44% (July 2014; 13 sites)
	% of women attending FP services and tested for HIV in Singida Region	25% (Oct. 2013;15 sites)	90% (July 2014;15 sites)
	% of HIV-exposed children testing for 1st PCR within 4-6 weeks in Arusha Region	63% (Jan 2014;18 sites)	83% (July 2014;18 sites)
	% of HIV-positive mother-HEI pairs seen at the facility each month in Arusha Region	6% (Jan 2014; 12 sites)	10% (July 2014; 12 sites)

- **Improved access to exclusive breastfeeding (EBF) and other HIV pediatric care:** Experience in the Kilimanjaro Region showed that improving processes contributes to sustained and improved access to exclusive breastfeeding and other HIV pediatric care. Figure 45 shows improvements achieved in critical PMTCT services, including the practice of explusive breastfeeding and enrollment of exposed infants into care. Figure 46 shows improved uptake of infant HIV testing through expanding services to other departments within the same facility.
- **Improved the percentage of women from ANC who bring partner for HIV testing**, which increased from 16% in September 2011 to 39% in February 2014 (Figure 47). Overall, there was a steady improvement in CD4 count testing in the 12-month cohort across sites. Most of the facilities conducted monthly QI meetings and were supported to ensure that they focus on the improvement objectives. Teams were also supported on identification of the data source for ART female clients receiving family planning methods. CD4 uptake in the 12-month cohort increased from 34% from January 2013 to 54% in April 2014.
- **Increased partner testing among pregnant women at ANC**: Some improvements were observed in male involvement in PMTCT services. In Malambo Health Center in Arusha Region, partner testing among new pregnant women at ANC increased from 17% in January 2013 to 79% by May 2014 (Figure 47).

Figure 45: Tanzania: Improvements in EBF and pediatric care services, 15 sites, Kilimanjaro Region (Jan 2012 – Feb 2014)

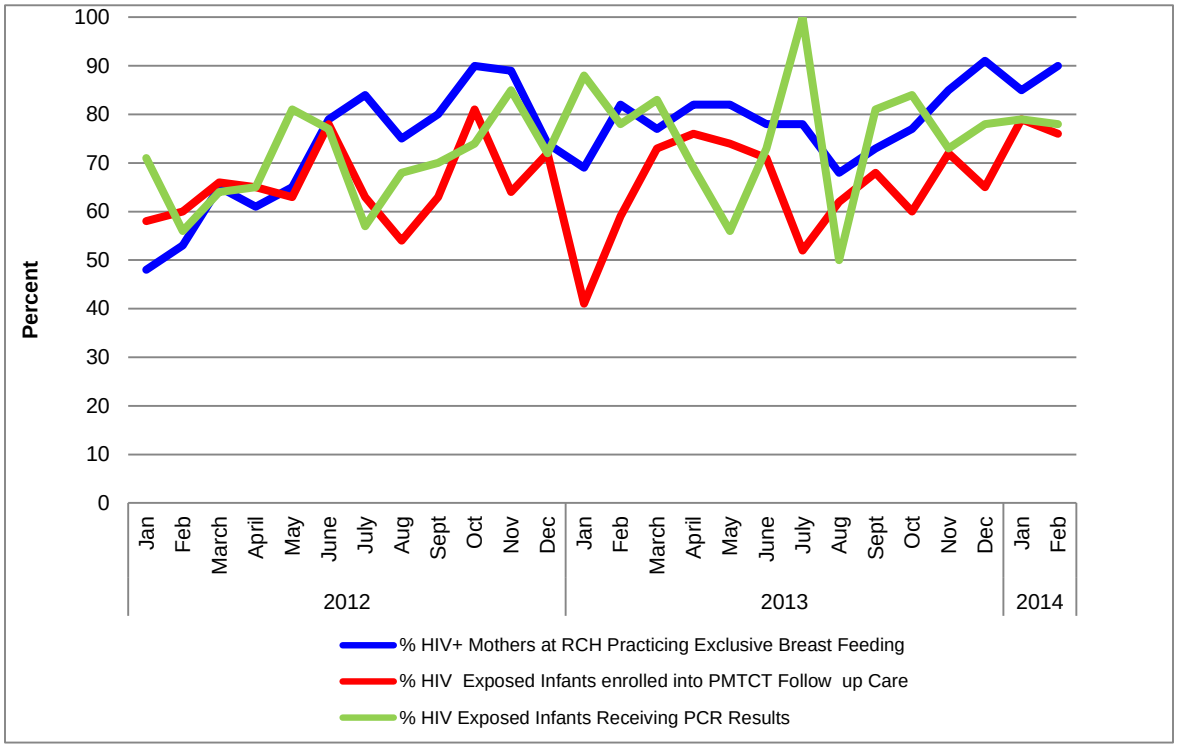
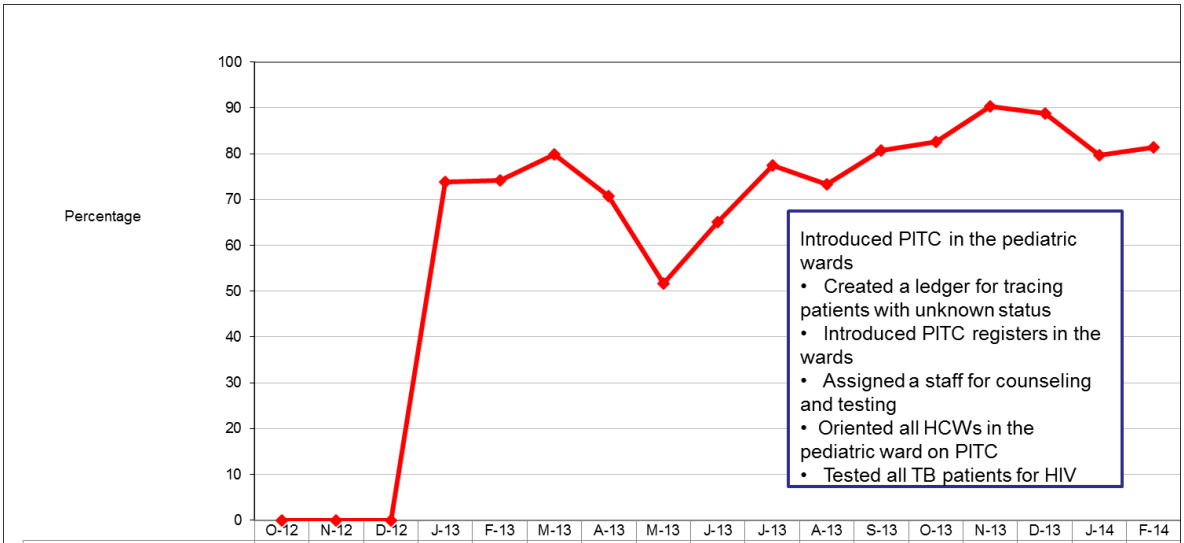
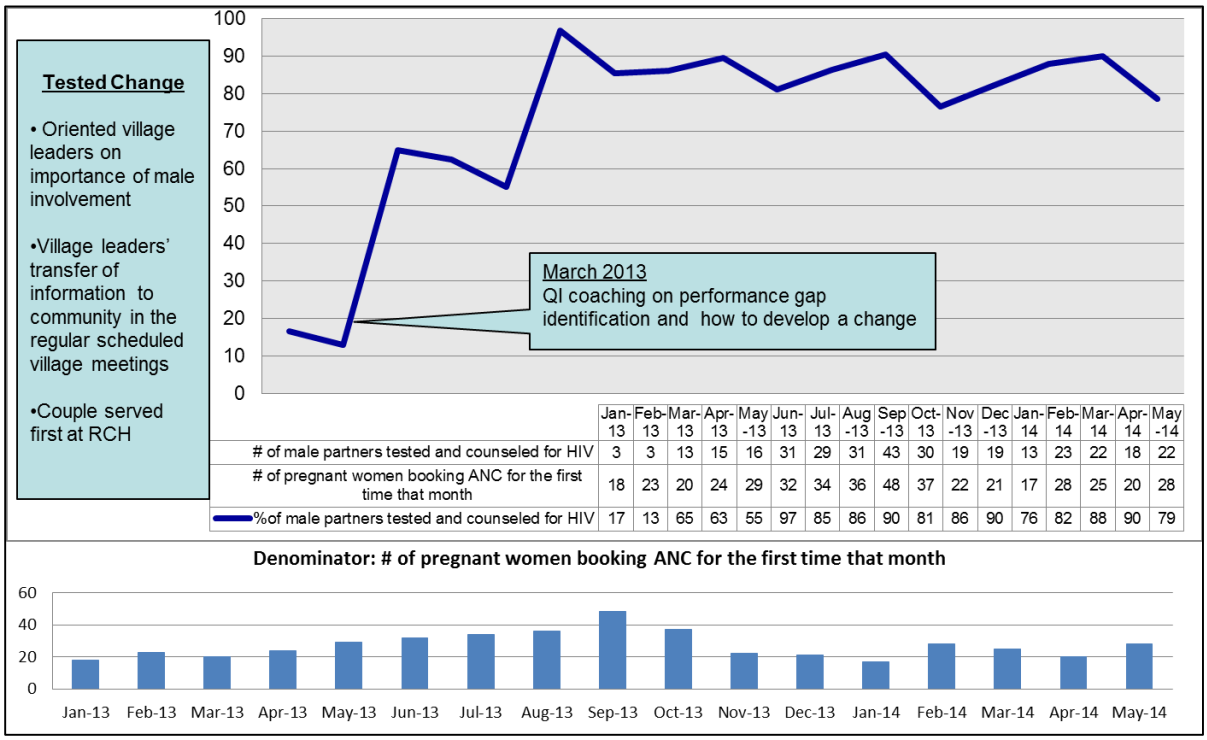


Figure 46: Tanzania: Percentage of pediatric in-patients tested for HIV in hospital pediatric wards, Kilimanjaro Region (Oct 2012 – Jan 2014)



	O-12	N-12	D-12	J-13	F-13	M-13	A-13	M-13	J-13	J-13	A-13	S-13	O-13	N-13	D-13	J-14	F-14
# of ped clients tested in a month	0	0	0	403	464	480	422	237	314	366	364	442	480	460	439	290	277
Total # of ped cases admitted with unknown HIV status in a month	211	214	216	546	626	601	597	458	482	473	496	548	581	509	494	364	340
% of pediatric clients tested for HIV in the pediatric ward	0	0	0	74	74	80	71	52	65	77	73	81	83	90	89	80	81
# of Sites Reporting	3	3	3	4	4	4	5	5	5	5	6	6	6	6	6	5	5

Figure 47: Tanzania: Percentage of male partners tested and counseled for HIV during PMTCT services, Malambo Health Center, Arusha Region (Jan 2013-May 2014)



	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	Jan-14	Feb-14	Mar-14	Apr-14	May-14
# of male partners tested and counseled for HIV	3	3	13	15	16	31	29	31	43	30	19	19	13	23	22	18	22
# of pregnant women booking ANC for the first time that month	18	23	20	24	29	32	34	36	48	37	22	21	17	28	25	20	28
%of male partners tested and counseled for HIV	17	13	65	63	55	97	85	86	90	81	86	90	76	82	88	90	79

Activity 2. Support the MOHSW towards elimination of HIV infection in children and reducing deaths among HIV-infected mothers as part of the Partnership for HIV-Free Survival

KEY ACCOMPLISHMENTS

PHFS, Mufindi, Iringa Region

- **ASSIST in partnership with Tunajali-Deloitte, RHMT, and CHMT conducted baseline assessment and oriented R/CHMTs on QI** (Q1): Ten sites selected for implementation of HIV-Free Survival from Mufindi District, Iringa region were assessed. The assessment revealed: QI activities were implemented in only two health facilities; Mafinga and Lugoda Hospitals; only five sites received training on NACS, but needed support to implement; health facilities were ready for PMTCT B+, however, there was a need to improve ART and RCH service; inadequate follow-up of mother-baby pairs; inadequate community linkages; and documentation was a challenge in many facilities.
- **First learning session for the PHFS sites** (Q1). Twenty-eight service providers and four CHMT members attended. During the learning session, findings from the baseline were shared, and priority areas for improvement were determined. Participants were introduced to QI principles and dimensions; facility teams were formed, and they developed work plans.
- **Conducted mentoring and coaching/learning session**: During Q2 ASSIST, in collaboration with the CHMT and Tunajali, conducted coaching and mentoring visits to the 10 sites implementing PHFS in Mufindi District. It was found that the QI teams had conducted one meeting, but no data was updated in the SES journal despite teams testing improvement changes. In this district, a second learning session was conducted for 19 service providers from 8 sites which were implementing the PHFS initiative.
- **Conducted a third learning session in Mufindi** (September 2014).

PHFS, Nzega District, Tabora Region

- **Conducted coaching and mentoring;** During Q2, a joint coaching and mentoring visit was conducted at 10 sites by ASSIST, EGPAF, and CHMT from Nzega District on assessing the

functionality of the QI teams. It was found that the majority of the teams had conducted at least one QI meeting. The coaches clarified issues raised by QI teams such as definition of indicators, sources of data, and assisted teams to update the SES journal. In May, coaching visits were conducted at 10 sites.

- **Held learning session** (Q2-Q3): 11 sites were trained in QI for ART/PMTCT services for five days with a total of 27 health care workers participating in the training. In addition, a total of 32 QI team members implementing PHFS participated in a five-day second learning session conducted by ASSIST in collaboration with EGPAF and CHMT. A third learning lesson was held in Nzega in August 2014.
    - The participants agreed on priority areas: ART initiation for HIV-positive pregnant women and lactating mothers, HIV-infected infants, and children below two years; HIV testing for children at OPD, RCH, and inpatient wards; FP for HIV-positive women of child-bearing age attending CTC services; male partner testing at RCH; follow-up CD4 count monitoring among PLHIV at six and 12 months after ART initiation; and pregnant women booking at 12 weeks.

PHFS Mbeya Urban District, Mbeya Region

- **Conducted coaching and mentoring visits:** ASSIST in collaboration with Baylor Pediatric AIDS Initiative and CHMT of Mbeya Urban conducted coaching and mentoring visits at the 10 PHFS sites. During the coaching visit, QI team functionality as well as progress of QI implementation was assessed by coaches. Some sites had conducted QI meetings but no site had updated the SES journal. The QI team members were coached on how to extract data from relevant data sources, and the SES journals were updated. Coaching visits were conducted in June.
    - Key results from the three learning sessions for the three districts included: Participants shared their experiences, accomplishments, and challenges in implementing the PHFS program. Some of the tested changes shared included: giving mother and her baby the same day appointment; serving mother and baby in one service point/room; using phones to provide feedback to mothers when DNA/PCR have been brought to the facility; providing health education on the importance of ARV to mother and baby; and shifting of postnatal care for women who are HIV-positive from CTC to RCH so that the mother and baby can receive services during one clinic visit. Each facility developed action plans using the MOHSW/URC SES journal.
- **Two ASSIST staff attended a three-day regional meeting in Kampala, Uganda where they shared their experiences with PHFS teams from Kenya and Uganda, IPs of all three countries, and the MOHs** (Q1). They also developed implementation plans with the IPs.
- **Facilitated a three-day National Learning Platform for the PHFS which involved the MOHSW, the USAID Mission, and PMTCT IPs** (April 2014). During the event the MOHSW briefed the participants on the status of PMTCT B+, NACS, safe motherhood, and postnatal care activities in the country. Meanwhile three districts implementing PHFS shared their successes and challenges encountered during implementation. This was followed by preparation of action plans based on lessons learnt from other teams.

RESULTS

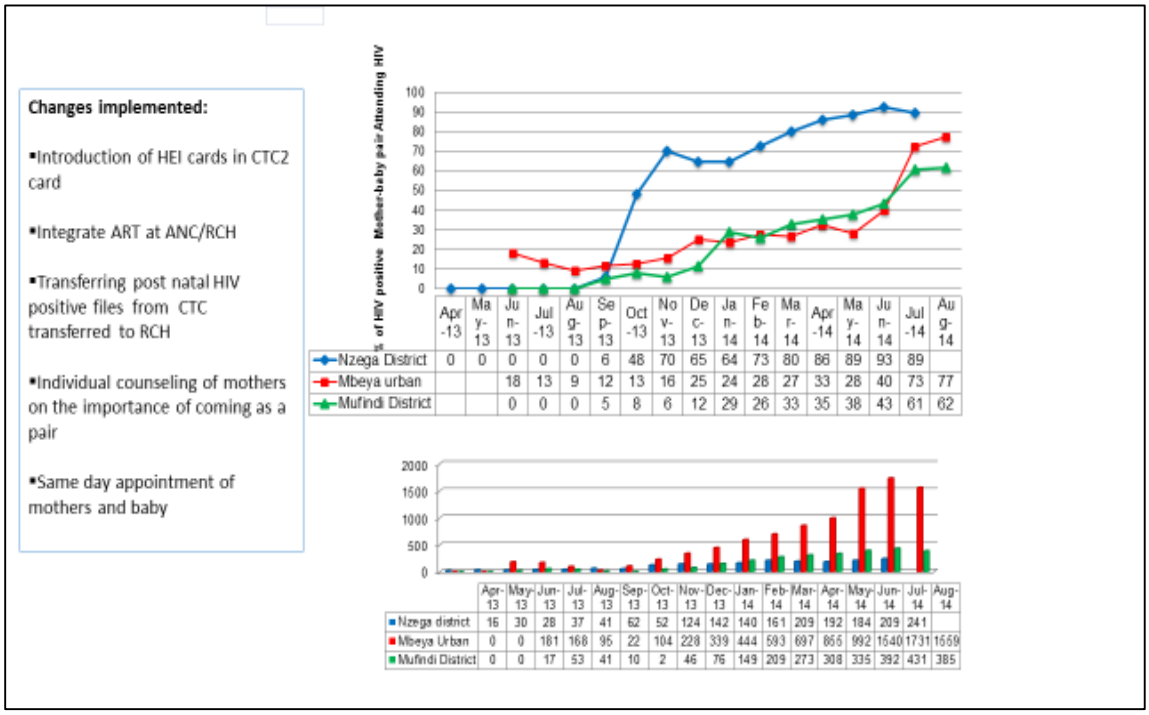
Improvement in Key Indicators

Activity	Indicator	Baseline	Current Value
1. To support the MOHSW and HIV Free Survival Implementing Partners towards elimination of HIV infection in children and reducing deaths	**% of pregnant and breastfeeding HIV-positive women on ARV (10 sites in each district)**		
	Mbeya June 2013 to May 2014	5%	93%
	Mufindi June 2013 to Aug 2014	59%	76%
	Nzega April 2013 to Aug 2014	13%	92%
	% of HIV-infected infants initiated on ART (10 sites in each district)		
	Mbeya July 2013 to May 2014	0%	100%
	Nzega April 2013 to July 2014	33%	100%
	Mufindi July 2013 to August 2014	25%	100%
	% of mothers attending the 4 standard postnatal visits (24hrs, 2-7 days 28, and 42 days) (10 sites in each district)		

Activity	Indicator	Baseline	Current Value
among HIV-infected mothers (Nzega, Mufindi, Mbeya)	Mbeya June 2013 to May 2014	14%	16%
	Nzega April 2013 to July 2014	0%	50%
	Mufindi June 2013 to August 2014	0%	50 %
	% of HIV-positive mother-baby pairs attending HIV service each month (10 sites in each district)		
	Mbeya June 2013 to May 2014	0%	28%
	Nzega April 2013 to July 2014	0%	89%
	Mufindi June 2013 to August 2014	0%	62%
	% of women seeking postnatal services at RCH receiving nutritional counselling (10 sites in each district)		
	Nzega Oct 2013 to July 2014	0%	91%
	Mufindi July 2013 to August 2014	61%	71%
	Mbeya June 2013 to May 2014	4%	25%
	% of HIV-exposed infants on exclusive breastfeeding (10 sites in each district)		
	Nzega April 2013 to July 2013	29 %	90%
	Mufindi June 2013 to August 2014	84%	70 %
	Mbeya June 2013 to May 2014	67%	91%
	% of pregnant and post-natal women who are malnourished (10 sites in each district)		
	Nzega Oct. 2013 to July 2014	0%	0%
	Mufindi July 2013 to August 2014	6%	1%
	Mbeya Sept 2013 to May 2014	23%	6%

Figure 48: Tanzania: Percentage of HIV-positive pregnant and lactating women taking ARVs in 10 PHFS sites each in Mbeya Urgan, Mufindi, and Nzega districts (June 2013-July 2014)

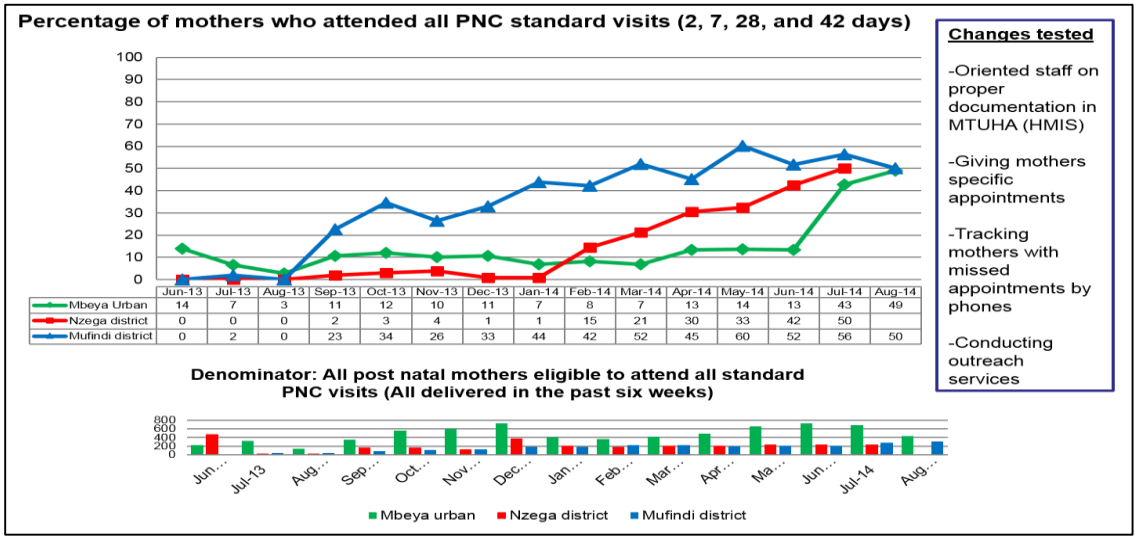
Figure 49: Tanzania: Percentage of mother-baby pairs attending HIV services each month in 10 PHFS sites each in Mbeya Urban, Mufindi and Nzega districts (April 2013 - Aug 2014)



	Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14	Jul-14	Aug-14
Nzega District	0	0	0	0	0	6	48	70	65	64	73	80	86	89	93	89	
Mbeya urban			18	13	9	12	13	16	25	24	28	27	33	28	40	73	77
Mufindi District			0	0	0	5	8	6	12	29	26	33	35	38	43	61	62

	Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14	Jul-14	Aug-14
Nzega district	16	30	28	37	41	62	52	124	142	140	161	209	192	184	209	241	
Mbeya Urban	0	0	181	168	95	22	104	228	339	444	593	697	865	992	1640	1731	1559
Mufindi District	0	0	17	53	41	10	2	46	76	149	209	273	308	335	392	431	385

Figure 50: Tanzania: Percentage of mothers who attended all PNC standard visits, Mbeya, Nzega, and Mfundi district (June 2013 – Aug 2014)



	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14	Jul-14	Aug-14
Mbeya Urban	14	7	3	11	12	10	11	7	8	7	13	14	13	43	49
Nzega district	0	0	0	2	3	4	1	1	15	21	30	33	42	50	
Mufindi district	0	2	0	23	34	26	33	44	42	52	45	60	52	56	50

Activity 3. Support the MOHSW and IPs to scale up improvement activities for ART services to achieve sustainable patient coverage, retention, and clinical outcomes

KEY ACCOMPLISHMENTS

- **Conducted mentoring and coaching visit, Morogoro region** (February 2014). ASSIST conducted coaching for 10 improvement teams with 67 health care providers. Teams were coached on the analysis of tested improvement changes, reviewing QI team functions, identifying new QI members to replace those who had left the facility, and development of work plans for the

next action period. The coaching team noted that there was improvement in bridging several gaps that were identified in January 2013. For example, at the Sabasaba health center, there was remarkable reduction in number of PLHIV on ART that were lost to follow-up. This improvement was made possible through team's initiative by use of expert patients to help with tracking of those who were lost and contacts made using mobile phone calls to lost cases.

- **Conducted orientation of peer mentors** (Q2)**.** A one-day meeting was organized for 53 peer mentors from Morogoro municipal and district councils. In this meeting peer mentors were oriented to new PMTCT option B+ approach and their roles in ensuring all HIV+ pregnant and breast feeding mothers take lifelong ART for PMTCT. Peer mentors would help in: alleviation of fear and anxiety in newly identified HIV+ mothers; and adherence to treatment and tracking of client who missed their appointment. Expert patients developed work plans on how they can support pregnant and postnatal women attending RCH clinics on adherence to ART.
- **Conducted learning and coaching sessions in Shinyanga** (February to March 2014). Two ASSIST staff conducted a four day learning session for the new 14 PMTCT/ART QITs and 30 health care workers participated. This was immediately followed by 6 day coaching and mentorship sessions at 10 old sites in Shinyanga and Simiyu regions for 100 HCWs.
- **Conducted coaching session** (May 2014). Conducted rapid assessment on patient centered care practices in two districts (Morogoro Municipal and Morogoro District Council) to understand existing gaps in four dimensions of patient centered care: 1) Respect for patients' values, preferences and expressed needs 2) Coordination and integration of care; 3) Information, communication and education; and 4) Access to ART/PMTCT care. In collaboration with RHMT, CHMT and HMT 154 PLHIV and 43 health care providers were interviewed from 14 health facilities in the two districts. After analysis, the findings will inform the improvement design.
- **Conducted mentoring and coaching visit to 15 ART/PMTCT collaborative sites in Lindi region where 10 old sites were supported on implementation of QI work plans** (June 2014). This visit enabled scaling of QI efforts to five new sites where QI teams were formed and oriented to QI concepts and principles, performance measures, and supported to develop work plans using improvement tools. A total of 91 health care providers from both new and old sites 11 CHMTs, three RHMTs and one EGPAF staff participated in the sessions.
- **During the fourth quarter, ASSIST supported RHMTs CHMTs and Tunajali to conduct coaching and mentoring visit in 10 implementing sites of Dodoma Municipal Council.** During the activity 85 facility managers and their staff were reached. The old teams were revived and scale up sites supported on forming QI teams and developing work plans.
- **The regional partners were also supported to scale up QI activities to 6 new sites**. In total 10 sites which were supported to conduct baseline assessments.

RESULTS

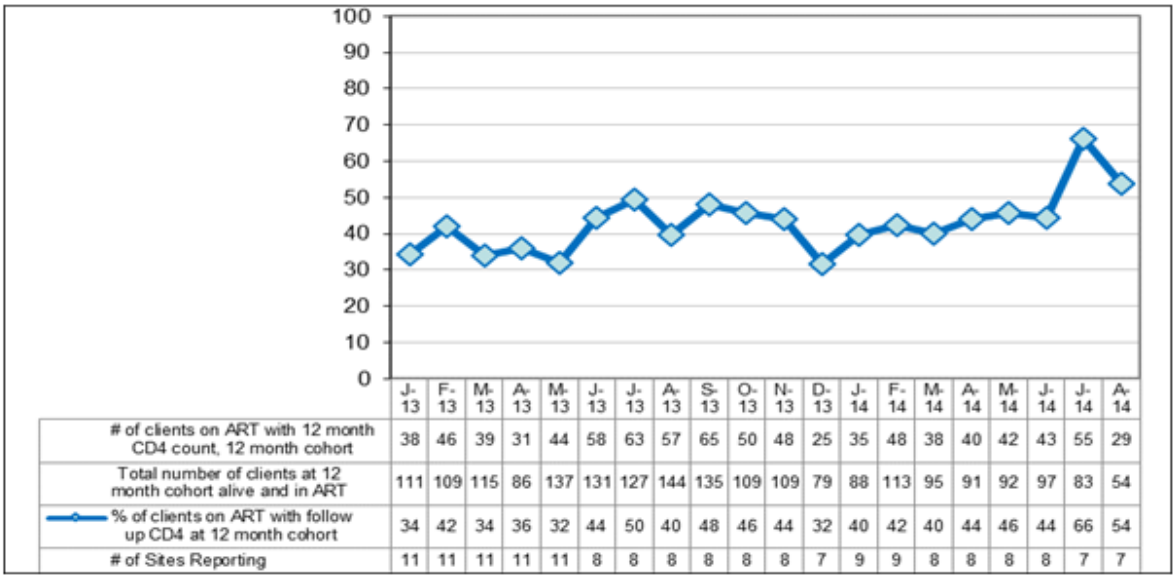
Improvement in Key Indicators

Activity	Indicator	Baseline	Current Value
1. To support the MOHSW and IPs to scale up improvement activities for ART services to achieve sustainable patients coverage, retention and clinical outcomes	**% of new sites with quality improvement teams**		
	Singida Region	0% (Oct 2013; 35 sites)	91% (July 2014; 25 sites)
	Dodoma Region	0% (Oct 2013; 10 sites)	100% (July 2014; 10 sites)
	Mwanza – Magu Region	0% (Oct 2013; 26 sites)	79% (Aug 2014; 26 sites)
	Mbeya Region	0% (Oct 2013; 10 sites)	100% (Aug 2014; 10 sites)
	Percentage of health care providers trained in QI in Singida Region, Iramba District (80 HCWs trained)	0% (Oct 2013; 35 sites)	100% (July 2014; 35 sites)

Activity	Indicator	Baseline	Current Value
	Percentage of HIV-positive pregnant women screened for TB at RCH in that month in Kilimanjaro Region	0% (Sept 2011; 13 sites)	100% (Feb 2014; 13 sites)
	Percentage of HIV-positive pregnant women counseled for family planning at ANC in the month	13% (Sept 2011)	100% (Feb 2014)
	Percentage of HIV-positive pregnant women counseled for family planning at CTC in the month	1% (Sept 2011)	54% (July 2014)
	Percentage of PLHIV who are lost to follow-up		
	Arusha Region	12% (July 2013; 13 sites)	11% (Feb 2014; 13 sites)
	Kilimanjaro Region	19% (Jan 2012; 13 sites)	15% (Aug 2014; 13 sites)
	Percentage of HIV mother-baby pairs lost to follow-up and then tracked back to care in Nzega Region	0% (Oct 2013)	65% (July 2014)

- **Improved CD4 testing to clients on ART**. Figure 51 shows that the percentage of clients on ART with follow-up CD4 at 12 months in Kilimanjaro Region increased from 34% in January 2013 to 54% in August 2014.

Figure 51: Tanzania: Improved CD4 testing to clients on ART (12 months cohort) in 12 sites in Kilimanjaro Region (Jan – Aug 2014)



	J-13	F-13	M-13	A-13	M-13	J-13	J-13	A-13	S-13	O-13	N-13	D-13	J-14	F-14	M-14	A-14	M-14	J-14	J-14	A-14
# of clients on ART with 12 month CD4 count, 12 month cohort	38	46	39	31	44	58	63	57	65	50	48	25	35	48	38	40	42	43	55	29
Total number of clients at 12 month cohort alive and in ART	111	109	115	86	137	131	127	144	135	109	109	79	88	113	95	91	92	97	83	54
% of clients on ART with follow up CD4 at 12 month cohort	34	42	34	36	32	44	50	40	48	46	44	32	40	42	40	44	46	44	66	54
# of Sites Reporting	11	11	11	11	11	8	8	8	8	8	8	7	9	9	8	8	8	8	7	7

Activity 4. Support the MOHSW, MVC, IPs and local structures to strengthen quality of care, support, and protection to MVC through improvement approaches

KEY ACCOMPLISHMENTS

- **ASSIST in collaboration with Bagamoyo District Council continued to support MVCCs/QITs:** Coaching session in three wards of Magomeni, Kiwangwa, and Fukayosi. A total of 17 QITs/MVCCs participated together with ward and village leaders. QITs have continued to work and collaborate with village authorities in mobilization of various resources in supporting most vulnerable children.

- **Teams worked to ensure children are protected against exploitation, abuse, and violence In Magomeni ward.** Two cases of abuse were identified by MVCC and CJF and reported to authorities for actions.
- **Organized the first meeting with QI Task force meeting to discuss the process of developing new MVC QI guideline** (March, 2014).
- **In collaboration with DSW conducted an introductory visit to Mkuranga District Council for initiation of MVC improvement activities, especially addressing child protection issues in Mkuranga District** (February 2014). The visit revealed that:
  - There were no MVCC/or specific board at the district level for overseeing MVC activities, and only five of 18 wards had formed MVCCs. Even where they existed, the MVCCs were not functioning. At village level, only 74 out of 121 villages had MVCC, but not active. There were no budgets for child protection activities or annual plans for child protection activities at district, ward, and village levels.
  - Most organizations (CBOs) provided direct aid like school supplies, fees, and food. Most children do not know where to report child abuse cases, and very few have courage to report abuses due to cultural issues.
  - There was inadequate skills and knowledge among key actors dealing with child protection issues; that was why some of them were not well addressed.
  - There is weak documentation and reporting, including application of data during planning due to lack of specific targets and indicators. There is also low understanding of children's rights among community members.
- **ASSIST and DSW staff conducted a Child Protection training at district level with a total of 22 members from district departments and representative of faith-based organizations and NGOs** (April 2014). This was followed by child protection training at the community level in June 2014 in which a total of 124 MVCC/child protection team members from three wards with 24 villages participated. The training was conducted at ward level for three days in each ward.
- **ASSIST supported Mkuranga and Bagamoyo districts to conduct coaching and mentoring to QITs/child protection teams.** Teams at ward and village levels in Mkuranga made plans on preventing and responding to child protection issues, such as educating parents and communities not to involve children during local dances in late hours (night), proper dressing during those dances, and spot check on local theatre/video rooms to make sure pictures/videos shown are relevant to local culture and traditions.
  - Teams also mobilized MVC caregivers to join the Village Community Bank (VICOBA), which encourages them to save and lend some money to support their basic needs, and within that they allocated some amount specifically to support MVC.

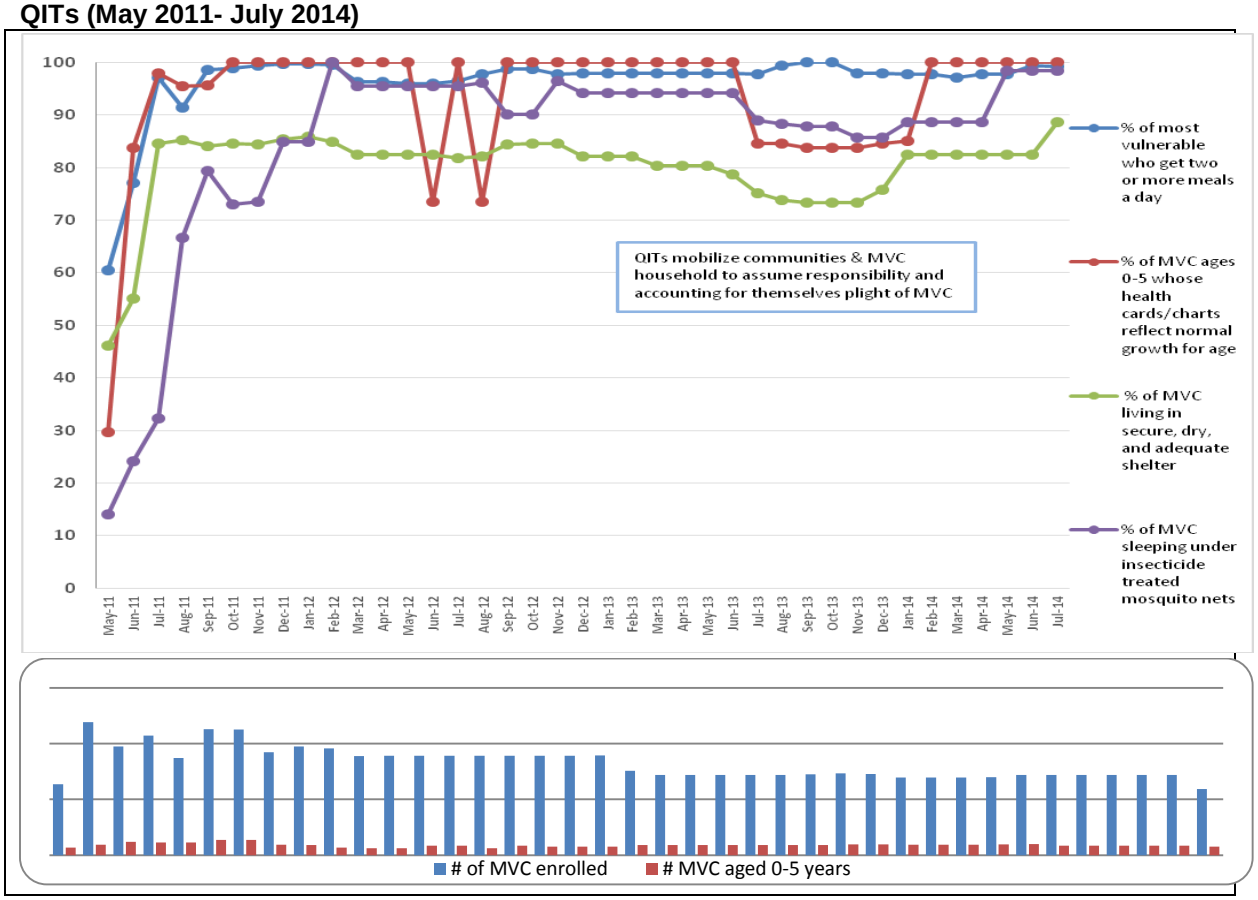
RESULTS

Improvement in Key Indicators

Activity	Indicator	Baseline	Current Value
1. To support the MOHSW, MVC, IPs and local structures to strengthen quality of care, support and protection to Most Vulnerable Children through Improvement approaches	**Increase in the proportion of MVC with adequate access to basic needs (25 sites):**		
	% of MVC with access to two meals in a day	14 % May 2011	98 % in July 2014
	% of MVC with access to adequate shelter	46% May 2011	89% in July 2014
	% of MVC with access to Community Health Fund (CHF)	0% May 2011	38% in July 2014
	% of MVCs enrolled and attending school	77 % May 2011	92% in July 2014
	% of MVC reporting to have slept under insecticide-treated bednets the previous night	60% in May 2011	99% in July 2014.
	Proportion of MVC with birth certificates (BC)	6 % in May 2011	39 % in July 2014.

- In Bagamoyo 25 teams/MVCC have continued to sustain the gains of supporting vulnerable children with basic services and ensuring linkage and integration of community social services to most vulnerable children and families (Figure 52).

Figure 52: Institutionalization of MVC services in 26 sites in Bagamoyo District Council by QITs (May 2011- July 2014)



Activity 5. Work with the MOHSW and stakeholders to develop a community home-based care (CHBC) quality improvement program and monitoring framework and support country-wide scaling up

KEY ACCOMPLISHMENTS

- **ASSIST provided TA to RHMT, CHMT, and HBC providers from 14 wards in Tanga City** (May 26-30, 2014). The support included orientation to the National SOP for HBC, review of all HBC recording and reporting tools, and development of action plans to improve gaps. Major gaps were around reporting timeliness, data completeness, and consistency as it moves from one level to another.
- **ASSIST supported RHMTs and CHMTs in Muheza to conduct an orientation on integration of HBC and MVC services in Muheza District** (August 4 -9, 2014)**.** A team of improvement advisors accompanied RHMT, CHMT, and HBC/ MVC IPs in Muheza District Council and started working with community groups to revive and strengthen initiatives for integrating HBC and MVC services in four wards, namely Genge, Kilulu, Kicheba and Mkuzi. The main activities conducted in preparation for implementation included conducting stakeholder meetings to advocate for integration and community linkage of HBC and MVCC, re-orientation of HBC providers and MVCC to data collection and reporting tools, and supporting the CHMT to strengthen and establish village health teams. During discussions with stakeholders it was realized that there were no linkages between HBC and MVC programs.

Activity 6. Support the MOHSW and partners to develop, field test and scale up national Quality Improvement Framework for PMTCT Option B+

KEY ACCOMPLISHMENTS

- **ASSIST supported the MOHSW and PMTCT IPs to develop national Early Warning (EWI) and QI indicators as well as assessment tools for PMTCT Option B+** (Q1).
- **During a pre-work visit in Magu District, a baseline assessment of early-warning responses by health facility teams as required by EWI and QI indicators was conducted in 10 health facilities** (Q1). The ASSIST team supported RHMT, CHMT, and facility QI teams on how to address encountered clinical and logistical gaps through on-site coaching and mentorship.
- **ASSIST conducted coaching and mentorship sessions to health providers from 12 health facilities in Magu District, Mwanza** (February 10-22, 2014). These sessions aimed at strengthening district and facility-level response mechanisms to address stock-outs of ARVs, test kits, and other supplies. Other objectives of the coaching visits included strengthening facility early warning response mechanisms to prevent development of virologic failure and emergence of HIV drug resistance and proper documentation of improvement interventions.
- **Conducted coaching and mentoring sessions** (April 9-17, 2014): In collaboration with RHMT and CHMT, ASSIST conducted coaching and mentorship sessions to service providers in all 26 health facilities providing PMTCT Option B+ services in Magu District. The focus was on supporting teams to overcome implementation challenges related to stock-outs of ARVs, HIV test kits, prescribing practices, and HIV testing to infants, women (during ANC, labor and post-natal), and their partners. In addition, QI teams were supported on how to correctly abstract baseline indicator data from various HMIS registers, drawing of run charts, and filling of SES forms.
- **Conducted first learning session** (June 16-27, 2014): ASSIST conducted the first learning session to staff from 29 health facilities providing PMCTC Option B+ in the district. Participants were oriented to concepts and scientific basis for improving quality of care as well as tools for monitoring and documenting improvement work. QI teams that had started Option B+ earlier in October 2013 shared their indicators' performance and how they managed to overcome challenges such as stock-outs of ARVs, test kits, and testing of women during labor and post-natal clinics.
- **ASSIST supported CHMT and IPs in Mwanza Magu, to introduce weekly SMS that shows the current stock for each PMTCT site** (Q4). The SMS are sent by facility managers to CHMT and regional IPs on weekly basis reporting on stock levels. This was in response to critical shortages of testing kits and unequal distribution of HMIS and ART registers. The practice assisted the pharmacist and Laboratory Technologist to identify PMTCT sites that are short on commodities and those ones that have surplus and guide relocation of testing kits. This led to an increase in the percentage of pregnant women tested and counseled for HIV at RCH from 63% in August 2013 to 76% in May 2014.

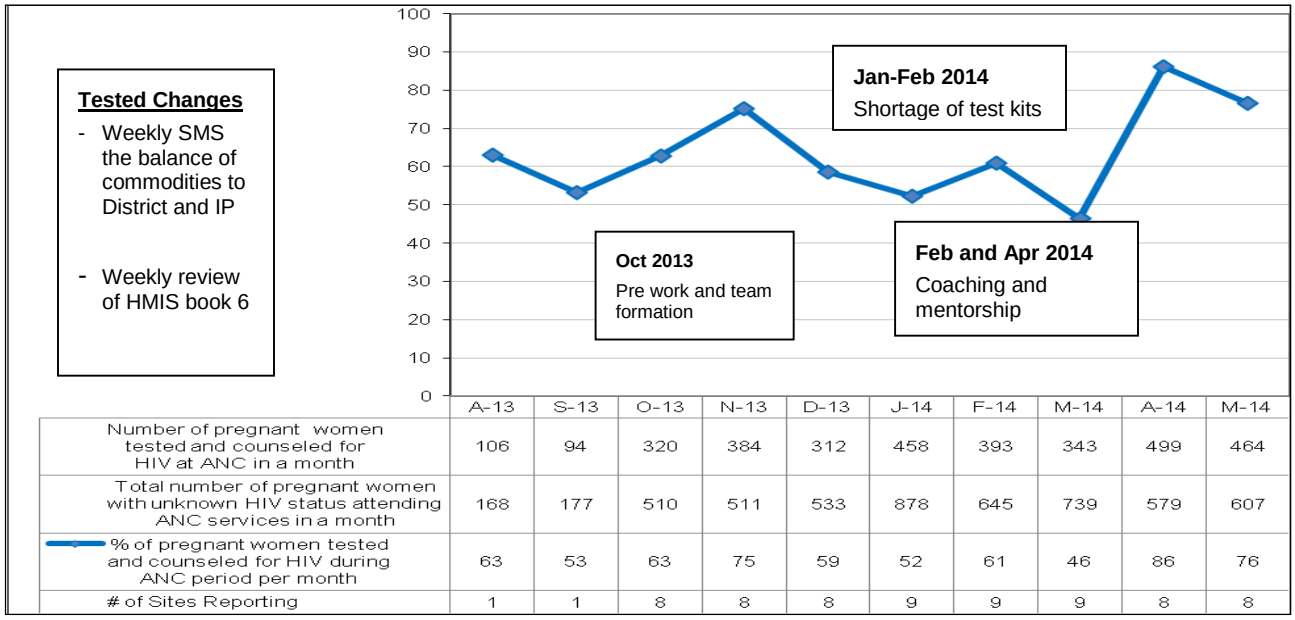
RESULTS

Improvement in Key Indicators

Activity	Indicator	Baseline	Current Value
1. To support the MOHSW and partners to develop, field test and scale up national Quality Improvement Framework for PMTCT Option B+	# of sites with QI teams tracking EWI indicators	0% October 2013	26 in August 2014
	% of pregnant women tested and counseled for HIV during ANC period in Magu District, Mwanza	63% (Aug 2013; 11 sites)	76% (May 2014; 11 sites)
	% of HIV-positive pregnant and breastfeeding women initiating ART who are prescribed an appropriate first-line ART regimen in Magu District, Mwanza	100% (Oct 2013; 9 sites)	100% (May 2014; 9 sites)
	% of HEI testing for 1st DNA/ PCR between 4-6 weeks each month in Magu District	11% (Oct 2013; 8 sites)	29% (May 2014; 8 sites)

- **Increased percentage of pregnant women tested and counselled for HIV** (Figure 53).

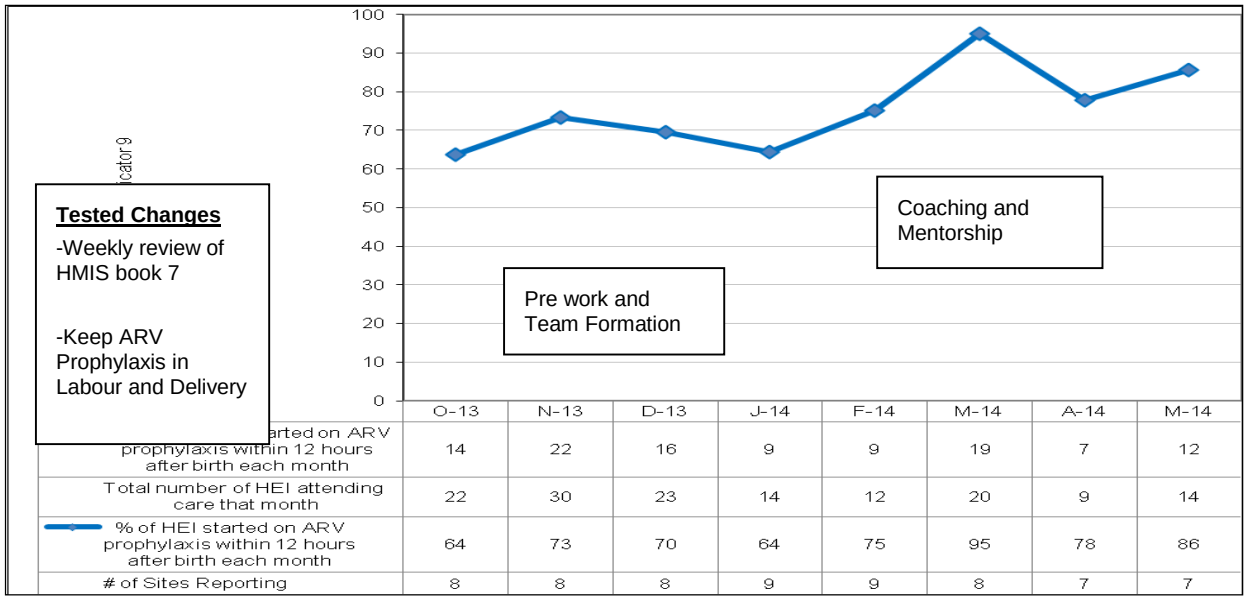
Figure 53: Tanzania: Percentage of pregnant women tested and counseled for HIV at RCH, at 9 sites in Magu District, Mwanza Region (August 2013 – May 2014)



	A-13	S-13	O-13	N-13	D-13	J-14	F-14	M-14	A-14	M-14
Number of pregnant women tested and counseled for HIV at ANC in a month	106	94	320	384	312	458	393	343	499	464
Total number of pregnant women with unknown HIV status attending ANC services in a month	168	177	510	511	533	878	645	739	579	607
% of pregnant women tested and counseled for HIV during ANC period per month	63	53	63	75	59	52	61	46	86	76
# of Sites Reporting	1	1	8	8	8	9	9	9	8	8

Health workers in PMTCT sites decided to keep ARVs at labor and delivery room for easy access and availability; after this practice, every HIV-exposed baby born at anytime was given ARV, and documented in HMIS register 7 (Figure 54).

Figure 54: Tanzania: Percentage of HEI receiving ARV prophylaxis within 12 hours after delivery, Magu, Mwanza (August 2013- May 2014)



	O-13	N-13	D-13	J-14	F-14	M-14	A-14	M-14
arted on ARV prophylaxis within 12 hours after birth each month	14	22	16	9	9	19	7	12
Total number of HEI attending care that month	22	30	23	14	12	20	9	14
% of HEI started on ARV prophylaxis within 12 hours after birth each month	64	73	70	64	75	95	78	86
# of Sites Reporting	8	8	8	9	9	8	7	7

Activity 7. Support MOHSW and IPs to improve the quality of ART care for infants and children exposed or infected with HIV

KEY ACCOMPLISHMENTS

- **Conducted baseline assessment, Mbeya District Council** (Q2)**.** A baseline assessment for

the Pediatric QI initiative was conducted to understand current pediatric ART coverage among children enrolled into care and treatment centers. HIV testing performance among children below 15 years was assessed to understand if children who accessed services in those facilities access HIV testing and counselling services and if they are linked to care for those identified as HIV positive through PITC.

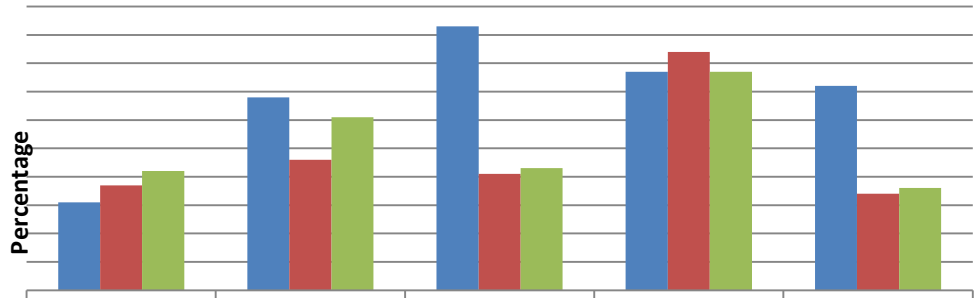
- Key findings: By December 2013, children below 15 represent 6% of the total cumulative enrollment into care. Among the children who were enrolled into HIV care, 90% had been started on ART. However 43% of the children enrolled were not on ART by the end of reporting period (October-December 2013). The number of children receiving ART in those facilities represented about 6% of the total number of PLHIV receiving ART services during the same period (Oct–Dec 2013). Five out of 18 HIV-infected children diagnosed as HIV positive through PITC program were enrolled into HIV care during the period of Oct-Dec 2013. HIV testing performance was poor in all four facilities visited.

- **Coaching was conducted in 39 sites from four regions of Tabora, Iringa, Shinyanga and Njombe. (April – June 2014).** In each health facility visited, QI teams were established and work plans were developed in pediatric QI focus areas. Also QI team members were oriented on a SES journal for documenting QI work.

RESULTS

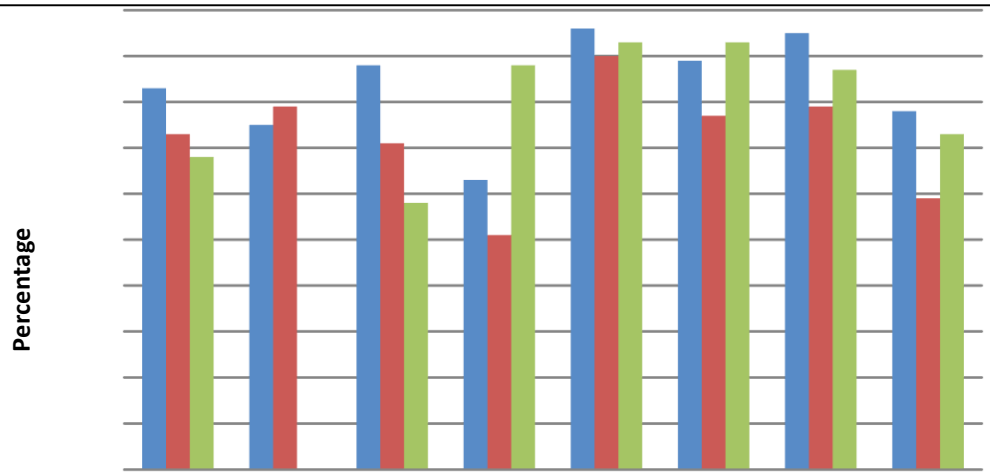
- **Data validation:** ASSIST was able to conduct data validation for the sites supported and providing ART services in Singida and Arusha regions. The CTC 2 cards that are being filled as part of documentation of ART services were systematically sampled for attendees in the previous month. Then, how the three main sections of the card (demographic, treatment eligibility and care provision) are filled out was examined for completeness in documentation. Figure 55 shows results of the data validation for five sites in Singida Region. As shown in Figure 56, consistency in documentation for all sections was observed in Waso, Kirurumo, Longido and Oltrumet sites in Arusha Region.

Figure 55: Filling of CTC2 Cards Sections by Health Care Workers, 5 sites, Singida region at the beginning of the improvement intervention



	Iramba	Mgongo	Urughu	Mtoa	Maluga
Demographic section	31	68	93	77	72
Treatment eligibility	37	46	41	84	34
Care provided to client	42	61	43	77	36

Figure 56: Filling of CTC2 Cards by Health Care Workers, 8 sites, Arusha region at the end of the improvement intervention



	Waso	SALMC	Malambo	Mt. Meru	Kirurumo	Longido	Oltrumet	ACC
Demographic section	83	75	88	63	96	89	95	78
Treatment eligibility	73	79	71	51	90	77	79	59
Care provided to client	68	0	58	88	93	93	87	73

SUSTAINABILITY AND INSTITUTIONALIZATION

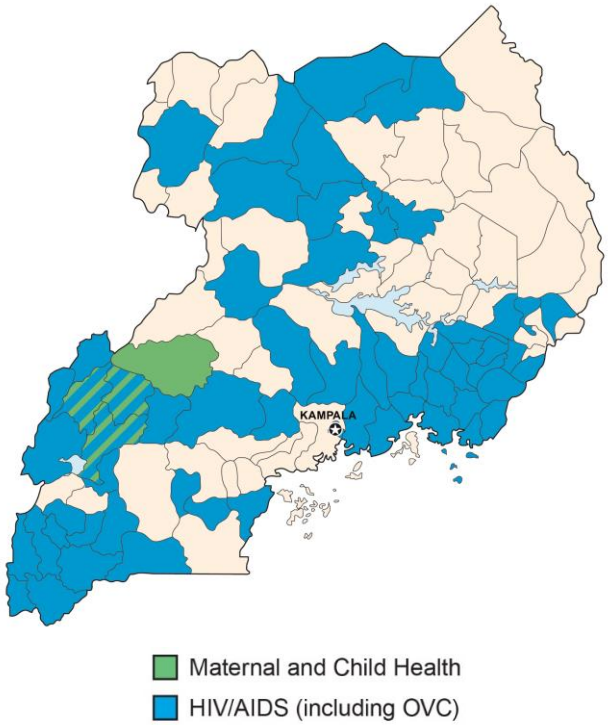
During FY14, ASSIST continued to support the MOHSW working with the existing structures and focusing on PEPFAR and MOHSW priorities. At the policy level, ASSIST supported the development of the National QI Strategic Plan defining the national improvement agenda (2013 – 2017), while at regional and district levels ASSIST supported the middle managers (RHMTs and CHMTs) to improve their skills in leading QI. At facility levels, ASSIST guided local managers to support QI teams through regular coaching and by providing frequent opportunities to share experiences. ASSIST is also supporting the National QI Forum which has brought together people working in improvement across programs and sectors to share experiences. QI is not yet a routine activity in the health sector in Tanzania, but through ASSIST, we have what we can call a community of practice, learning areas in model districts, QI tools and infrastructures as well as an improvement agenda.

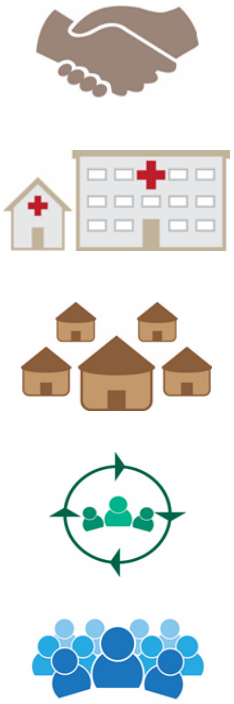
UGANDA

BACKGROUND

The USAID ASSIST Project started work in Uganda in October 2012, following on many years of technical support from the USAID Health Care Improvement and Quality Assurance projects. ASSIST provides support to the Ministry of Health, districts, USG implementing partners and health facilities to improve the quality of services provided through the HIV continuum of response, improve the quality of safe male circumcision services, improve TB case detection and treatment and TB-HIV care, and implement the Partnership for HIV-Free Survival. ASSIST also supports the MOH to apply improvement methods to deliver quality maternal and newborn health services and to integrate family planning services in primary care and referral facilities. The overall aim is to learn and apply the lessons learned from the demonstration facilities to other sites. In Uganda, ASSIST is also working with the Ministry of Gender, Labor and Social Development (MGLSD), partners involved in the care and support of orphans and vulnerable children (OVC), civil society organizations (CSOs), districts, sub-districts, and villages to apply quality standards to improve services for vulnerable children.

Scale of USAID ASSIST's Work in Uganda





MOH, MGSLD, 20 Implementing Partners

142 facilities

26 communities

176 Quality Improvement Teams

2.84 million out of 36 million

PROGRAM OVERVIEW

Activities	What are we trying to accomplish?	At what scale?	Improvement Activity	Activity
1. Improve HIV care (Continuum of Response)	• Build capacity of USG partners to improve quality of HIV/AIDS services in Uganda	10 USG IPs in 49 facilities in 41 districts. Public, private not-for profit and private facilities from health center III to general hospitals Working with 2 USG partners at the community level in 24 villages	x	
	• Build capacity of the MOH to coordinate and oversee implementation of national quality improvement plans and strategies	Implementation of the Quality Improvement Framework and Strategic Plan (QIF&SP) demonstrated in 1 health region (Rwenzori Region), 7 districts, 12 health subdistricts (HSDs) and 19 health facilities		
	• Generate new knowledge on how to meaningfully engage leaders in sustaining and institutionalizing quality improvement in health care	3 districts (Busia, Kisoro and Manafwa), in 12 sites (4 sites per district)		
2. Safe male circumcision	• Improve the quality and safety of SMC services through building the capacity of USG implementing partners to	30 sites in 26 districts directly supported by USAID ASSIST and selected extra IP sites. Starting June	x	

Activities	What are we trying to accomplish?	At what scale?	Improvement Activity	Activity
(SMC)	identify and address gaps within the SMC program	2014, ASSIST scaled up to 49 sites in 40 districts. ASSIST had 10 IPs up to June 2014; SPEAR closed at the end of June, and IRCU closed in July.		
	• Support MOH to develop and roll out standard SMC tools			
	• Ensure QI is integrated into the SMC training			
	• Generate new knowledge related to SMC			
3. Partnership for HIV-Free Survival	• Achieve HIV-free survival for infants	22 health facilities in 6 districts in 2 regions (eastern and south western regions)	x	
	• Learn how best to improve the quality of pre and postnatal EMTCT care, including nutrition interventions	22 health facilities in 6 districts in 2 regions (eastern and south western regions)		
	• Build capacity of implementing partners to use the QI approach to integrate and improve the quality of EMTCT and nutrition work	4 implementing partners (TASO, STAR EC, STAR SW, SPRING) in 22 demonstration sites		
4. Improve TB care	• Build capacity of the implementing partners to use QI methods to improve the provision of quality TB services with special focus on Track TB project • Build capacity of Districts and MOH National TB and Leprosy Program (NTLP) to support the provision of quality TB care using the CQI • Generate new knowledge related to TB	6 facilities supported by Track TB	x	
5. Improve maternal, newborn and child health	• Build capacity of USG partners through joint onsite coach visits and quarterly peer-to-peer learning meetings to continuously learn how to improve the quality of MNCH services in the Saving Mothers Giving Life (SMGL) districts. • Build capacity of the district health teams through joint onsite coach visits and quarterly learning meetings. • Generate new knowledge and best practices in improving the quality of MNCH services as part of the continuous learning and adapting agenda	20 facilities in 4 SMGL learning districts and 10 light-support facilities in the 6 SMGL scale-up/phase II districts.	x	

Activities	What are we trying to accomplish?	At what scale?	Improvement Activity	Activity
	• Continuous mapping to track adoption and scaling-up of interventions by partners			
6. Integrate family planning into maternal newborn and child health	• Build capacity of Marie Stopes Uganda to improve the quality of family planning services.	6 facilities supported by Marie Stopes Uganda in the 4 SMGL districts of western Uganda	x	
	• Build capacity of partners and health facilities to integrate family planning services into MNCH and HIV programs	18 sites of the 4 SMGL districts		
	• Generate new knowledge on integrating FP into MNCH	18 sites of the 4 SMGL districts		
7. Improve quality of services for orphans and vulnerable children services	• Provide technical support to MGLSD and partners to employ proven modern QI approaches to ensure continuous improvement in quality of services received by every OVC in Uganda	4 districts 11 sub districts 10 CSOs 10 SOVCCs 24 villages	x	
	• Build the capacity of MGLSD to provide a coordinated approach to improving the quality of services for OVC	National levels (Ministry to provide information on expected partners)		
	• Generate knowledge on how to improve compliance with OVC standards for improved quality of OVC services	10 CSOs, 4 districts, 11 sub-districts		

Activity 1(a). Improve HIV care (Continuum of Response)

KEY ACCOMPLISHMENTS

- **Conducted learning sessions:** The first learning session was held for all 49 facilities in the first quarter. During the second quarter, ASSIST conducted an additional learning session for 13 selected facilities in the four regions implementing HIV Continuum of Response (COR) activities.
- **Conducted coaching sessions:** Supported facility QI teams to develop action plans, implement them, and get a common understanding on the prevention care for the clients who test negative in the facilities. Specific activities included:
  - Supported NU-HITES staff and facility teams at 10 facilities whose goal was to provide high quality HIV care services by focusing on the HIV COR cascade processes, identifying any gaps, and addressing them through developing and implementing appropriate action plans/items.
  - Worked with two private facilities supported by Uganda Private Health Services Project in the usage of the recommended MOH client appointment book.
  - Supported selected sites to test changes to improve identification of HIV positive children by improving HIV testing among children of HIV positive clients in outpatient departments, paediatric wards and HIV clinics, to understand retention of mother/baby pair in Early Infant Diagnosis (EID) program

- **Held three stakeholders' meetings** (Q3)**:** Held stakeholders' meetings with IPs, district health teams, and facility leaders. The meetings were aimed at engaging stakeholders to share experiences and challenges in implementing the HIV COR and to plan for improvement work in the COR sites.
- **Harvest meeting** (September 2014): Conducted a harvest meeting to document the changes which sites have implemented to improve the coverage indicators in the CoR. These changes will be organized into a change package and shared with partners for spread.

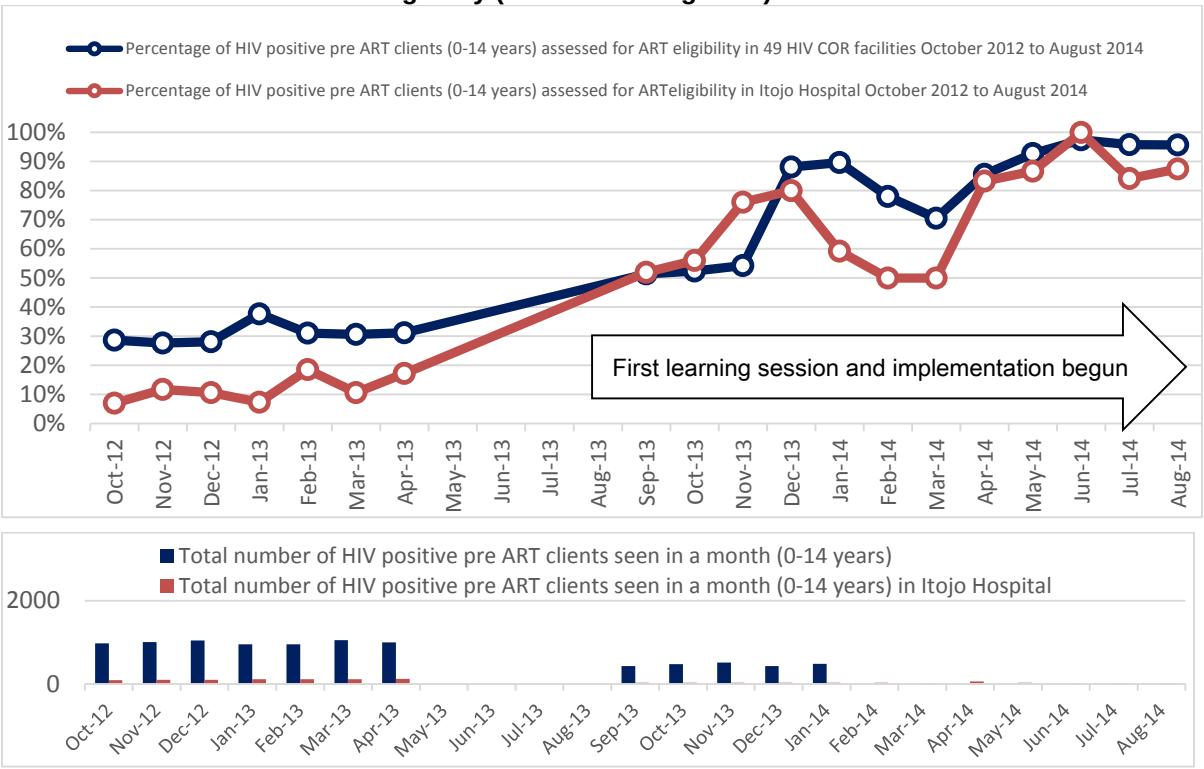
RESULTS

Improvement in Key Indicators

Activity	Indicator	Baseline	Last value
Improve HIV Care (Continuum of Response)	% newly tested HIV-positive linked and enrolled into HIV care, during review period	70% (May 2013) 38 sites	76% (Aug 2014) 45 sites
	% HIV-positive pre-ART clients started on ART in a month (15+yrs)	79% (May 2013) 41 sites	75% (Aug 2014) 45 sites
	% HIV positive pre-ART clients started on ART in a month (0-14yrs)	80% (May 2013) 40 sites	88% (Aug 2014) 45 sites
	% HIV-positive babies (0-2yrs) enrolled in care that have been started on ART	78% (May 2013) 41 sites	88% (Aug 14) 45 sites
	% HIV-positive on ART that have been retained in care (0-14yrs)	84% (May 2013) 24 sites	85% (Aug 14) 45 sites
	% TB/HIV co-infected clients that are on ART	63% (May 2013) 45 sites	86% (Aug 14) 45 sites
	% TB/HIV co-infected clients completing TB treatment	41% (May 2013) 42 sites	64% (Aug 14) 45 sites
	% HIV-positive pregnant mothers keeping clinic appointments	88% (May 2013) 34 sites	83% (Aug 14) 45 sites
	% HIV-positive lactating mothers keeping clinic appointment	85% (May 2013) 25 sites	89% (Aug 14) 45 sites

- **Increased proportion of clients tested for HIV for the 1st and 2nd time in the past 12 months**. The proportion of clients tested for HIV increased from 44% in one site in November 2013 to 84% in 48 sites in July 2014. Some changes which sites tested to improve this area included: Increasing testing points; assigning a focal person to review and update registers; assigning linkage facilitator to register and provide post-test counselling; physically escorting clients from HCT points to ART clinics, use referral forms; and increasing contact time with clients so as to give adequate information and attend to new clients before older clients.
- **Improved assessment of children less than 15 years for ART in HIV COR facilities** (Figure 57) shows improvement in the percentage of HIV-positive children (0-14 years) who were assessed for ART eligibility. Change ideas to improve this indicator included: improved identification of HIV-positive children among the clients less than 15 years coming for services to the facilities by opening new HCT points in OPD especially for children; implementing HCT in pediatric wards; and implementing an HIV clinic for children of HIV-positive clients.

Figure 57: Uganda: Percentage of HIV-positive pre-ART clients (0-14) seen in a month that have been assessed for ART eligibility (Oct 2012 – Aug 2014)



Activity 1(b). Continuum of HIV care, treatment, and support (community component)

KEY ACCOMPLISHMENTS

- **Identified the top 10 villages in Mitooma health center IV catchment area (STAR SW region) where missed HIV visits commonly occurred** (Q2)**.** Data on HIV appointments from 381 PLHIV clinic records was analyzed to identify villages where missed HIV appointments were concentrated.
- **Conducted QI training for community teams in 10 villages in Mitooma District** (Q2).
- **Developed a standard community linkage and follow-up process for PLHIV in a learning session.** At the health facility, the process begins by a PLHIV visit to the health facility; review PLHIV on appointment by location; and listing PLHIV for linkage to community support and feedback. At the community level, the process begins by collecting lists of PLHIV with follow-up consent, follow-up by VHTs and Community Support Agents, and feedback.
- **Conducted coaching sessions on a monthly basis.** ASSIST supported coaching sessions in 18 villages and three health facilities. An orientation meeting for eight district-based coaches for community activities was held. Thereafter, independent sessions were held in 12 villages and two health facilities and districts. At least 216 community personnel and 30 facility-based expert patients were reached. About 95% of community based improvement teams in the East Central region of Uganda reached a team maturity score of 3.0. This implies that in addition to testing changes in more than one improvement area, collecting data and observable evidence for improvement, teams described changes being tested and met on a monthly basis. About 60% of the teams in the South Western region attained a team maturity score of 2.5.

RESULTS

- **There has been an improvement in following up PLHIV within the community.** This was tested in 7 villages between July and August 2014 and of those lost to follow up, 68% were traced in the community. Of a total number of 15 PLHIV traced, 73% were found alive but had stopped

treatment, 20% were dead, and 7% had self-transferred elsewhere/to other health facility. Of the patients found alive, 11 (91%) were referred back to care by community personnel.

- **Tracing HIV patients lost to follow-up**. Some improvements were observed in tracing HIV patients lost to follow-up (no show in HIV care for more than three consecutive months) (Figure 58) and appointment keeping for HIV care (Figure 58).
- **Addressed gender gaps:** Figure 59 shows that the proportion of women followed up in the three villages [Buwanzu and Kulingo (Kamuli District) and Nkusi (Bugiri District] was higher compared to men. Reasons cited for the lower proportions among men included stigma due to non-disclosure of HIV status to families or friends. As a result of the changes tested, there is an effort to trace both men and women.

Figure 58: Uganda: Tracing HIV patients on ART lost to follow-up (July – August 2014)

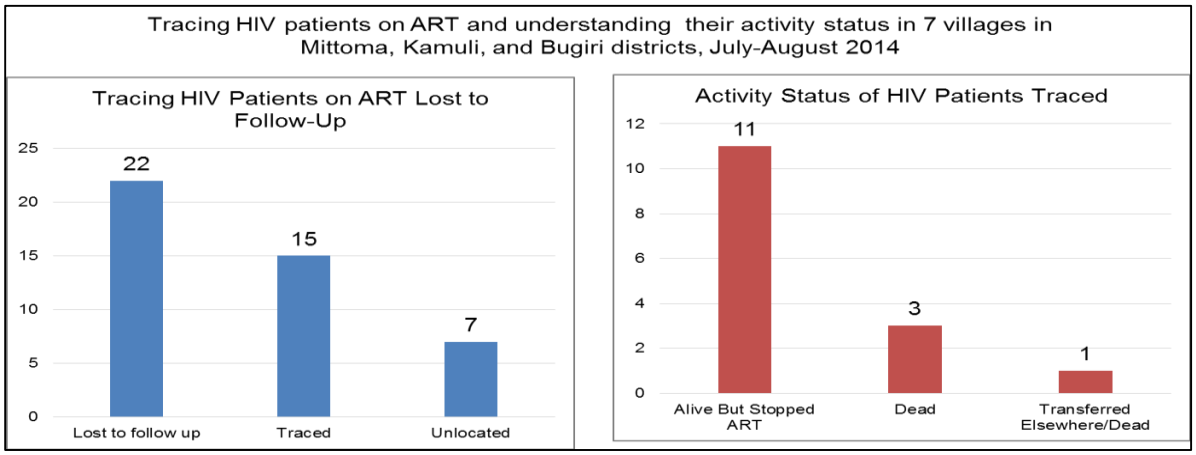
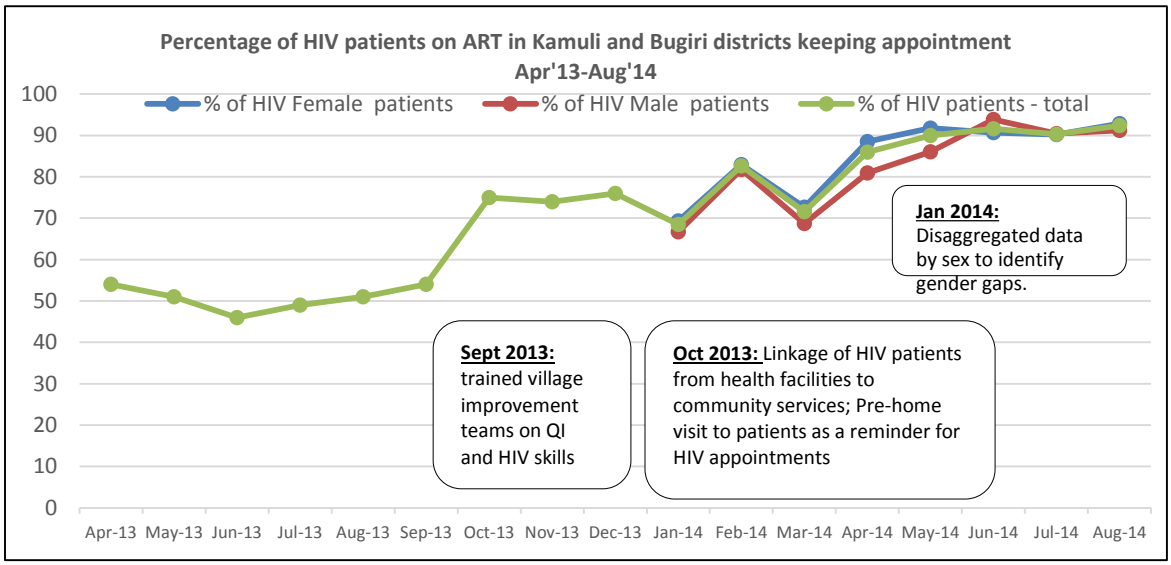
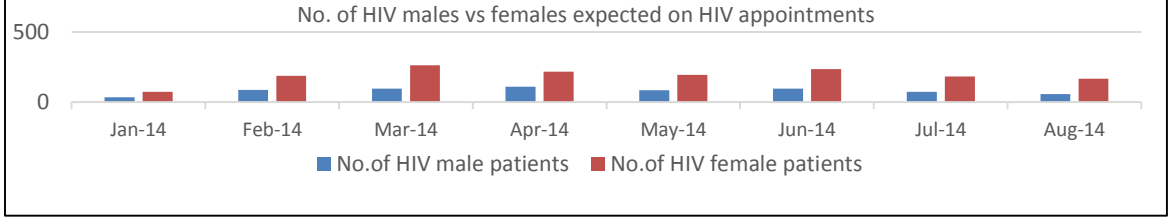


Figure 59: Uganda: Percentage of HIV patients on ART keeping appointment, Kamuli and Bugiri districts (April 2013-Aug 2014)





Activity 1(c). Testing the effectiveness and efficiency of applying the Chronic Care Model

ACCOMPLISHMENTS

- **Conducted the first learning session for 3 sites in Mityana District** (Q1).
- **Carried out four coaching visits** (Q1-2)**.** Sites continued to work on improving the quality of records and reducing patients' wait times. Since September 2013, these have improved from 78% of complete medical records to an average of 91% in December 2013. The percentage of clients on ART who wait less than 30 minutes between service points increased from 58% September 2013 to 88% in December 2013.
- **Supported sustainability of improvements** (Q3)**:** Teams in Mityana sites were supported to sustain improvement gains and also spread beyond HIV chronic care. Despite not supporting these teams since March 2014, they have maintained improvement work. One facility, St Padre Pio health center III, has gone on to implement quality improvement in the operating theater and maternity departments since April 2014. Staff in these sections regularly meet to review data and develop changes to address gaps. They were also oriented on use of a documentation journal by the HIV chronic care team to enable them to document their improvement work. The team has also formed an infection control committee to help identify and address issues related to infection control. Mityana and Nakaseke hospital chronic care teams plan to institute the same changes used in HIV care to improve diabetic care since they have diabetic clinics in place.
- **Addressed human performance factors through orientation of expert patients** (Q3)**:** At least one expert patient at each of the facilities in Nakaseke District participated in the quality improvement orientation training, getting an opportunity to share and learn from fellow patients from Mityana. At the end of the orientation, these expert patients were assigned roles back at their facilities like it was done in Mityana, such as pre-packing drugs a day before, triaging patients, file retrieval, and patient registration, which roles were previously done by health workers.

RESULTS

- A comparison study carried out between May 2013 and February 2014 of the intervention district (Mityana) with the control district (Nakaseke) showed that retention improved by 22% in the intervention district compared to 4% in the control district. Patients' outcomes improved by 24% in Mityana compared to 1% in Nakaseke. This improvement is associated with the impact of quality improvement and chronic care approaches.

Activity 2. Safe Male Circumcision

KEY ACCOMPLISHMENTS

- **Conducted learning sessions** (Q1-2)**.** A peer-to-peer learning session for all 30 sites was conducted in November 2013. Its main objective was to provide an opportunity for QI teams to share experiences and learn from each other and to harvest best practices to spread to other sites.
- **Participated in an External Quality Assessment (EQA) led by inter-agency PEPFAR team** (November 2013). This was a follow on to the previous EQA conducted in 2012. ASSIST participated in the EQA through working with IPs to address the gaps identified at the 2012 EQA. Results after the 2013 EQA indicated that there had been marked improvement in the indicators being assessed in the period between the two EQAs.
- **Supported the National Safe Male Circumcision Task Force (NTF)** As part of its technical support to the MOH, USAID ASSIST supported the MOH to convene three SMC NTF meetings which provide oversight to the national SMC program.
- **Conducted monthly coaching sessions in collaboration with implementing partners to all the 30 sites.** Coaching sessions were conducted monthly in all 30 intense support facilities. QI teams were supported to test and implement changes to address quality of SMC. During Q4 an additional 19 new sites were taken on for intense support.
- **In collaboration with implementing partners, district health officials, and the MOH, all sites**

were supported to come up with changes for improving SMC quality indicators (Q3).

- **Conducted joint PEPFAR SMC data quality assessment (DQA)** (July 2014). An inter-agency PEPFAR team conducted a data quality assessment at selected SMC sites in Uganda. ASSIST actively participated in this exercise by working with the PEPFAR team to identify sites for the DQA. Preliminary results indicated that ASSIST-supported sites had better data management systems in place. The assessment team also noted poor spread of best practices from ASSIST supported sites to other IP sites.

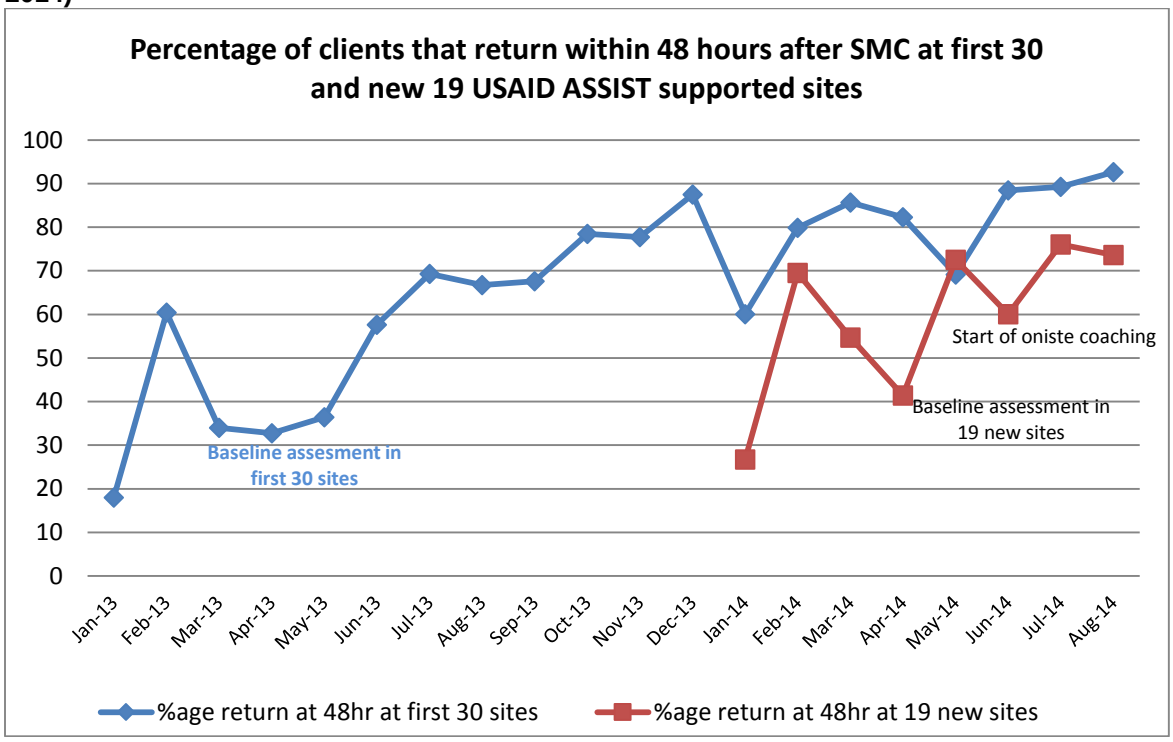
RESULTS

Improvement in Key Indicators

Activity	Indicator	Baseline	Last value
Safe Male Circumcision	% of SMC sites that meet the minimum quality standards	10% (May 2013) 4 sites	54% (Sept 14) 30 sites
	% of clients that experience moderate to severe adverse events	0.5% (Oct 2012) 8 sites	0.4% (Sept 2014) 29 sites
	% of clients who were counselled tested and received HIV test result within SMC setting	73% (Oct 2012) 11 sites	100% (Sept 2014) 29 sites
	% of clients that are assessed for sexually transmitted infection prior to circumcision	81% (Jan 2013) 11 sites	100% (Sept 2014) 29 sites
	% of SMC clients with documented informed consent prior to circumcision	83% (Jan 2013) 14 sites	100% (Sept 2014) 29 sites
	% clients of safe male circumcision that return for review after circumcision	58% (Oct 2012) 4 sites	93% (Aug 2014) 17 sites

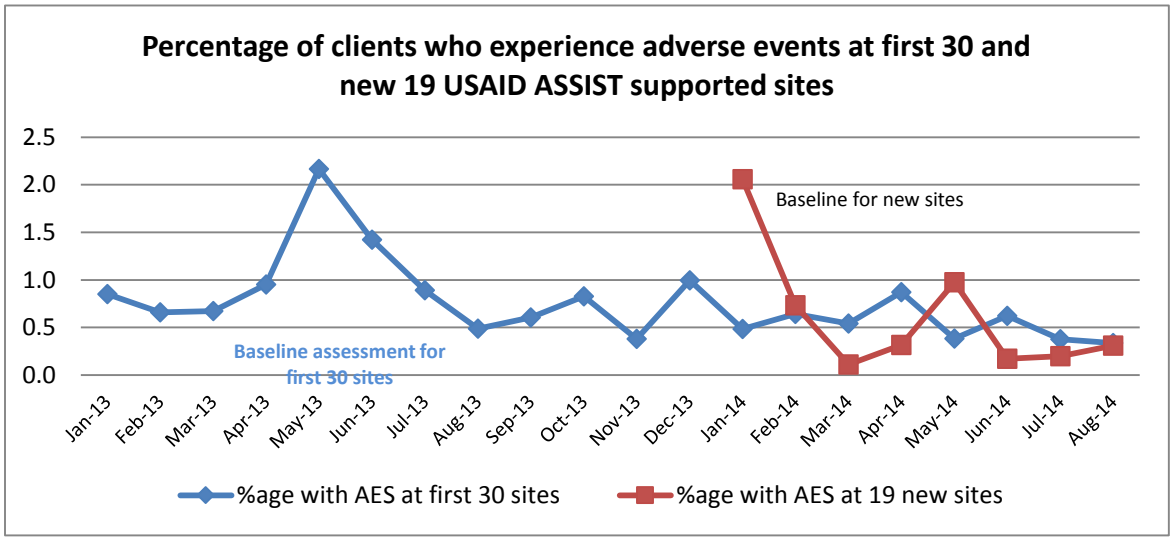
- **Improved percentage of VMMC clients returning for follow-up**: At baseline, most sites did not know the importance of client follow-up, and clients were told to only return in case they had a problem. Health workers were oriented on the importance of follow-up and as a result incorporated the importance of follow-up in their group education sessions emphasizing that clients should return for bandage removal. With this, follow-up improved from 34% in one site (April 2013) to 92% (Aug 2014). The drop in May 2014 was as a result of one site scaling up circumcision through outreach with over 3000 clients getting circumcised in one month but the site was not well prepared to follow up the clients (Figure 60). Although client follow-up has improved, it remains a major problem in the spread sites. This is an indication of poor or lack of spread by IPs beyond the intense support sites visited by ASSIST.

Figure 60: Uganda: Percentage of clients returning for review after 48 hours (Jan 2013 – Aug 2014)



- **Improved percentage of clients who experience adverse events:**
  Figure 61 shows that whereas since July 2013, the rate of adverse events had been mantained below 1% in the initial 30 demonstration sites, in the scale-up sites the rate started above 2%.

Figure 61: Uganda: Percentage of clients who experience moderate to severe adverse events after circumcision at the original 30 and 19 new ASSIST-supported sites (Jan 2013- Aug 2014)



Activity 3. Partnership for HIV-Free Survival

KEY ACCOMPLISHMENTS

- **Hosted and participated in the PHFS regional meeting** (Q1)**:** ASSIST prepared for and hosted the PHFS regional conference in Kampala, Uganda, attended by 80 participants. Participants included country teams from Kenya and Tanzania, partners within the PHFS, and the MOH. The

purpose was to review the implementation of the PHFS across countries, share lessons learned, and address challenges.

- **Conducted monthly coaching sessions.** Conducted 10 joint monthly coaching visits to all 22 health facilities. Discussions focused on improving the special visits for mother-baby pairs where they receive additional services based on the age of the exposed baby.
- **Conducted learning sessions** (Q2 & Q4)**:** Held two learning sessions for all 22 health facilities.
- **Conducted first harvest meeting** (February 2014). The harvest meeting included identification of successful and unsuccessful changes; evaluation by teams to identify teams' "best advice" for new teams related to data quality, retention of mother-baby pairs, and routine visits.
- **Facilitated three knowledge handover meetings** (April, March and July 2014): Two knowledge handover meetings were held in the South Western region in Ntungamo and Kisoro districts. Four teams from the demonstration phase and 24 additional health facilities in the spread phase were brought together to share and learn from the demonstration sites. One knowledge handover meeting was held between three demonstration sites and four spread sites in Namutumba District.
- **Developed and disseminated change packages:** Developed and disseminated three change packages on improving the quality of EMTCT data, improving retention of mother-baby pairs in care and improving the quality of services provided at routine visits for mother-baby pairs. These change packages have been shared widely and will be used in the spread phase to scale up what we have learned in new sites.
- **Conducted knowledge handover session to COR team** (Q4): Part of the PHFS spread strategy is to spread what has worked to improve the quality of EMTCT care to the sites that are working on Continuum of Response collaborative. To facilitate this spread, a knowledge handover session was held between the PHFS and COR teams at a demonstration site in Namutumba.
- **Held first learning session for spread sites in Namutumba District** (Q4): The purpose of the learning session was to facilitate the spread of change ideas for the first focus areas of the PHFS in new sites that are just starting out with improvement work.

RESULTS

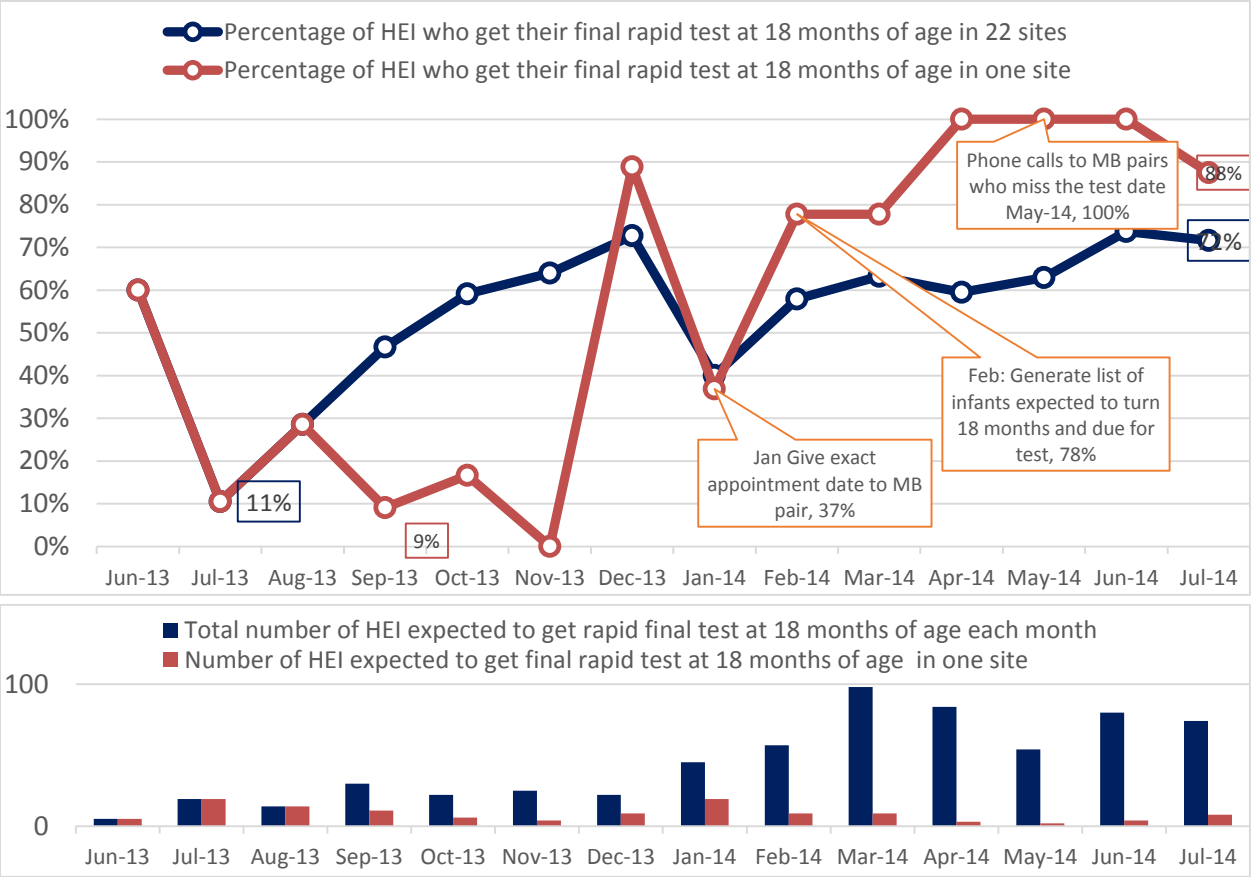
Improvement in Key Indicators

Activity	Indicator	Baseline	Last value
PHFS	% of HIV-negative women retested for HIV as per national guidelines	Apr'13 (12%) 5 sites	93% (Sep 2014, 22 sites)
	% of HIV-exposed babies who were given ART prophylaxis	Apr'13 (12%) 15 sites	100% (Sep 2014, 22 sites)
	% of HIV-positive pregnant women initiated on ART	Apr'13 (83%) 20 sites	96% (Aug 2014, 22 sites)
	% of HIV-positive mothers who receive IYCF counselling at each visit	Apr'13 (23.7%) 15 sites	100% (Sep 2014, 22 sites)
	% of HIV-positive mothers who receive maternal nutrition counselling at each visit	Apr'13 (23.3%) 15 sites	99.8%% (Sep 2014, 22 sites)
	% of exposed infants reporting to be adhering to recommended IYCF practices	Apr'13 (73.3%) 20 sites	97% (Sep 2014, 22 sites)
	% of HIV positive pregnant and lactating mothers who receive nutrition assessment every month	Apr'13 (20.4%) 19 sites	99% (Sep 2014, 22 sites)
	% of exposed infants who receive nutrition assessment every month	Apr'13 (32.4%) 16 sites	99.8% (Sep 2014, 22 sites)
	% of HIV positive mothers who are found to be malnourished during the reporting period	Apr'13 (0.88%) 11 sites	1.1% (Sep 2014, 22 sites)

Activity	Indicator	Baseline	Last value
	% of exposed infants found to be undernourished and receive therapeutic or supplementary feeding support at any point during the reporting period	Apr'13 (100%) 3 sites	15.8% (Sep 2014, 22 sites)
	% of HIV positive mothers found to be undernourished and receive therapeutic or supplementary feeding support at any point during the reporting period	Apr'13 (0%) 1 site	33.3% (Sep 2014, 22 sites)
	% of exposed infants who are found to be malnourished at any point during the reporting period	Apr'13 (5%) 1 site	1.3% (Sep 2014, 22 sites)
	%of mother-baby pairs retained in care each month	Apr'13 (7.9%)	79.7% (Sep 2014, 22 sites)

- **Increased the proportion of HIV-exposed babies who received a final rapid test at 18 months.** The proportion of HIV-exposed babies who got a final rapid test at 18 months of age increased from 11% in one site in June 2013 to 88% in 22 sites in July 2014 (Figure 62). Some changes which sites tested included: synchronizing the appointment for the baby and the mother to ensure they return to the health facility at the same time; generating a list of those infants expected to come for the final rapid test; and making phone calls to the mothers who miss their paired appointments.

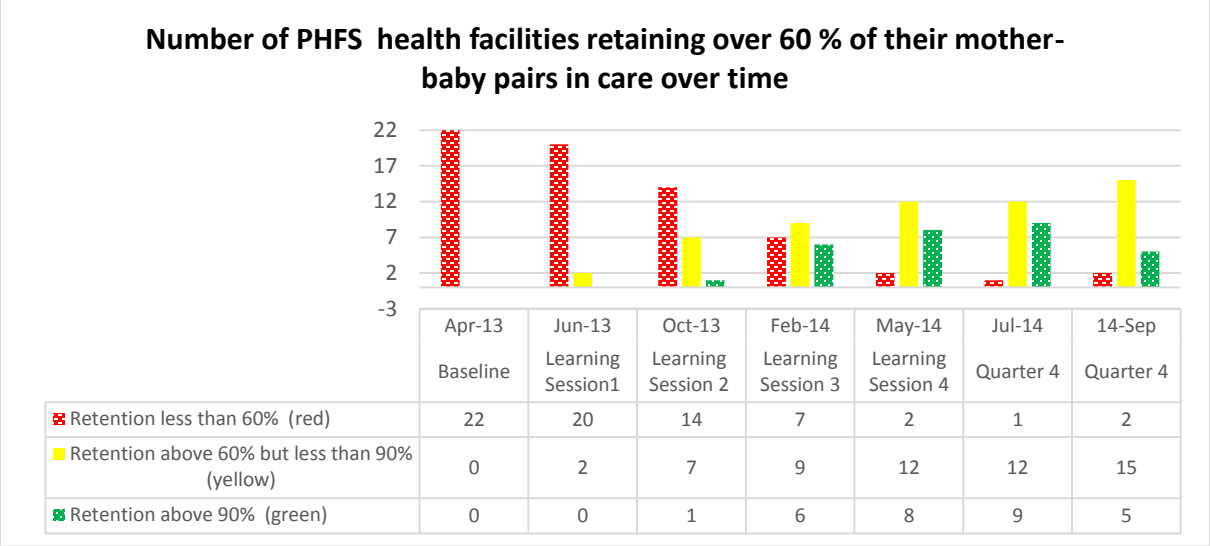
Figure 62: Uganda: Percentage of HIV-exposed infants who get their final test at 18 months of age in 22 sites and 1 site (June 2013- July 2014)



- **Retention of mother-baby pairs in care:** Overall, 1,224 of the expected 1800 (68%) mother-baby pairs were retained in care, compared to the 39 (2%) at baseline in April 2013. As of September 2014, 5 health facilities were retaining over 90% of mother-baby pairs in care, 15 sites retained

between 60 and 90% of their mother-baby pairs in care, and only 2 sites retained less than 60% of mother-baby pairs (Figure 63).

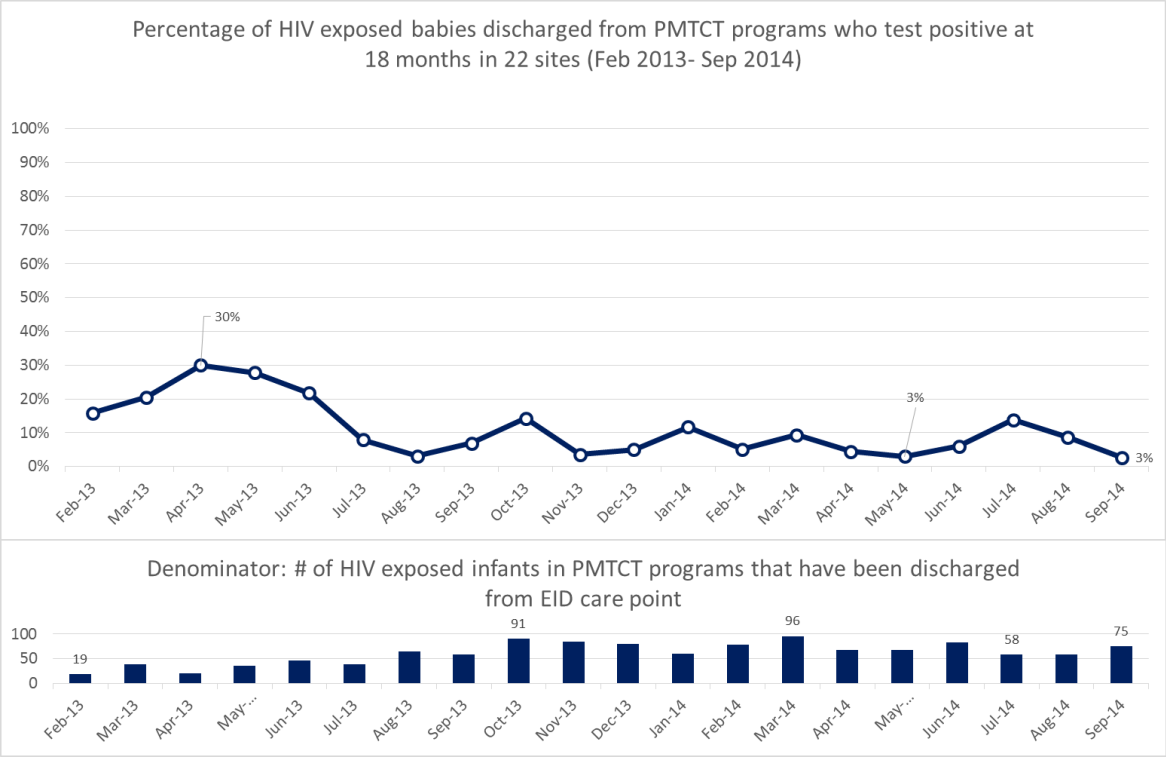
Figure 63: Uganda: Number of PHFS-supported sites retaining over 80% of their mother-baby pairs in care over time (April 2013 – Sept 2014)



	Apr-13 Baseline	Jun-13 Learning Session1	Oct-13 Learning Session 2	Feb-14 Learning Session 3	May-14 Learning Session 4	Jul-14 Quarter 4	14-Sep Quarter 4
Retention less than 60% (red)	22	20	14	7	2	1	2
Retention above 60% but less than 90% (yellow)	0	2	7	9	12	12	15
Retention above 90% (green)	0	0	1	6	8	9	5

Reduction in the number of HIV-exposed infants (HEI) who are discharged as HIV-positive at 18 months. Figure 64 shows a reduction from 30% in April 2013 in 7 sites to 3% in May 2014 in 22 sites.

Figure 64: Uganda: Percentage of HIV-exposed infants discharged from PMTCT who test positive at 18 months (Feb 2013-September 2014)



- **Increased mother-baby pairs who receive a standard package of care at routine visits each visit.** As of February 2014, 98% of mother-baby pairs who came to the health facilities received a

standard package of care. The standard package of care includes ART for the mother, cotrimoxazole or nevirapine for the baby, nutrition assessment for the pair, infant and young child feeding counselling and an appointment for the next visit. Changes tested included: placing reminder notes on the wall to remind clinicians and midwives about the services and updating the cards; filling out mother and babies' cards completely before the pairs leave the clinic; on job training of health workers and expert clients to provide services such as nutrition assessment using MUAC, infant and young child feeding guidelines; counter book/ form to keep a record of who received all the services; informing mothers about the services to expect; merging EID and ART clinics; and dispensing drugs in the same area where mother-baby pairs are seen.

Activity 4. Improve TB care

KEY ACCOMPLISHMENTS

- **Finalized baseline data collection in January 2013**
- **Conducted QI training for Kampala Capital City Authority (KCCA) based health care workers.** In January 2014, ASSIST trained 25 KCCA staff from 6 health facilities and division offices in QI.
- **Conducted facility coaching session on a monthly basis** (Jan – Sept 2014) with six facilities, 68 facility-based health care workers, and five KCCA TB division supervisors. Focus was on increasing the number of TB cases notified at the health facilities through supporting facilities to: Introduce triaging for cough and other symptoms suggestive of TB at care entry points (e.g., OPD, HIV clinic, ANC clinics, and in-patients) using an ICF tool; improve linkage of confirmed TB cases and enrollment into TB care; and improve documentation of TB services. Facility teams were supported to take up improving data quality as improvement projects, and these were supported on a weekly basis to discuss, analyze performance, and implement improvement projects to address the identified gaps.
- **Conducted coaching session** (Q4): Coaching sessions during the year were conducted in all six health facilities to support facility team members to improve the quality of TB data. There was a review of the data quality using the current definition (to ensure that patients' information is recorded in the TB unit registers at the end of each patient clinic visit).
- **Conducted learning session** (September 9-11, 2014): ASSIST conducted a second learning session and a harvest meeting for the six KCCA health facilities implementing TB QI activities. Twenty-five participants attended, including the facility-based health workers from the TB clinic, OPD, HIV clinic laboratory and the community supporters. During the meeting, health facilities put in place ways to improve TB data quality (completeness and accuracy of patients' information within the TB recording and reporting tools).

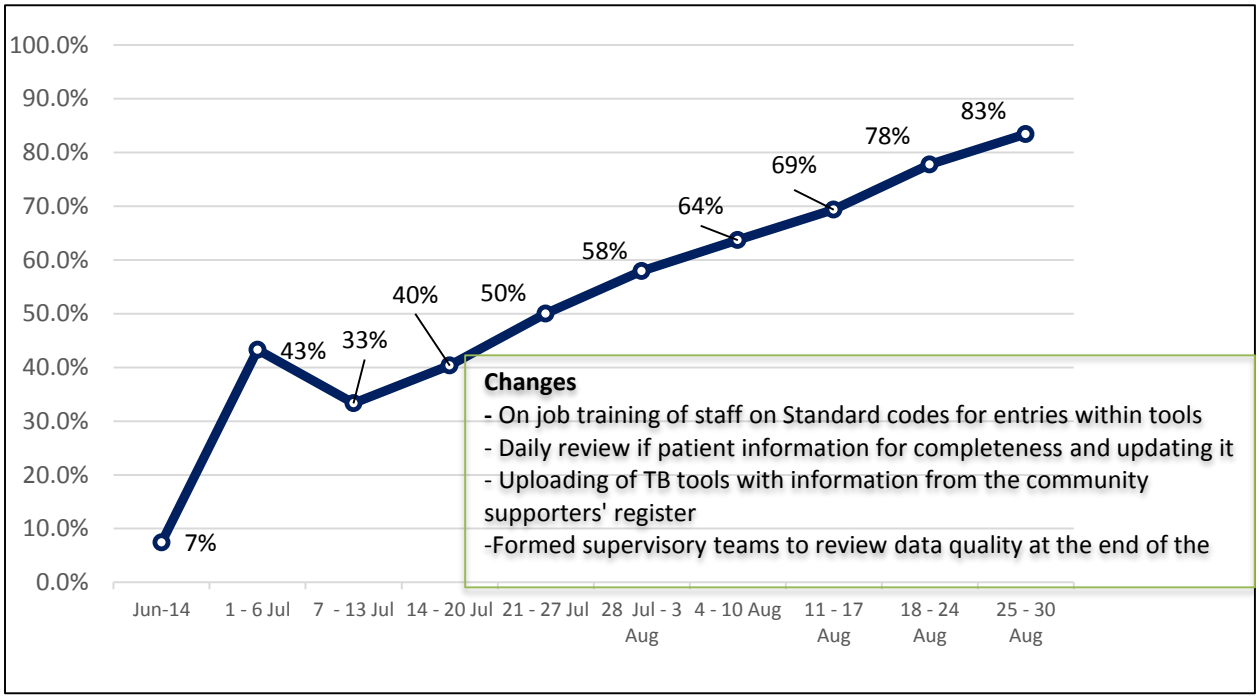
RESULTS

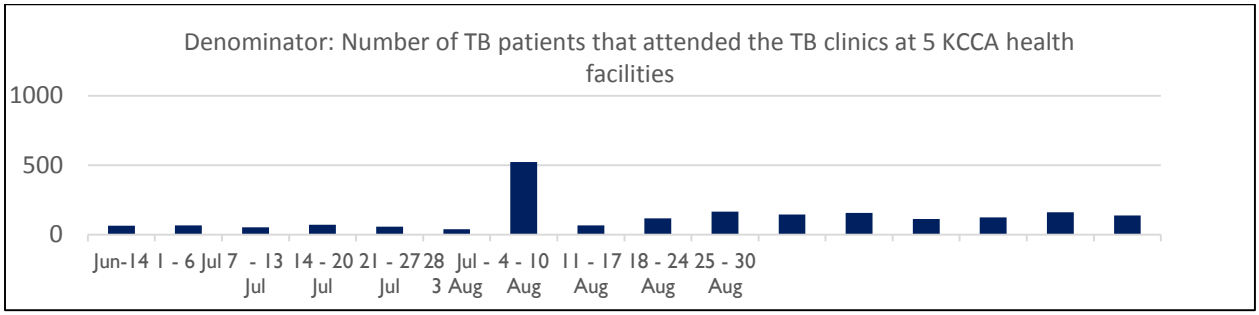
Improvement in Key Indicators

Activity	Indicator	Baseline	Last value
Improve TB care	% of TB patients seen in the clinic whose information is complete and accurately filled	61.3% (Dec 2013)	83% (Aug 2014)
	% of TB suspects evaluated for active TB	62.7% (Dec 2013)	76% (Aug 2014)

- **Improvement in TB data quality:** Figure 65 shows progress the sites made in improving the completeness of TB patient information in TB recording and reporting tools.

Figure 65: Uganda: Percentage of TB patients seen at 5 KCCA TB clinics whose information is complete and accurately filled in the TB tools (Dec 2013 – Aug 2014)





- **Increase in the number of TB suspects identified**: A gradual increase in the number of TB suspects identified was reported from 47 in December 2013 to 364 in June 2014 to 555 in August 2014. Those evaluated for active TB rose from 51% as reported in Feb 2014 to 76% in August 2014 (Figure 66).
- **Increased TB/HIV co-infected clients on ART**: Figure 67 shows increases in getting co-infected patients on ART among the COR sites, from 48% in Dec 2013 to 80% in August 2014.

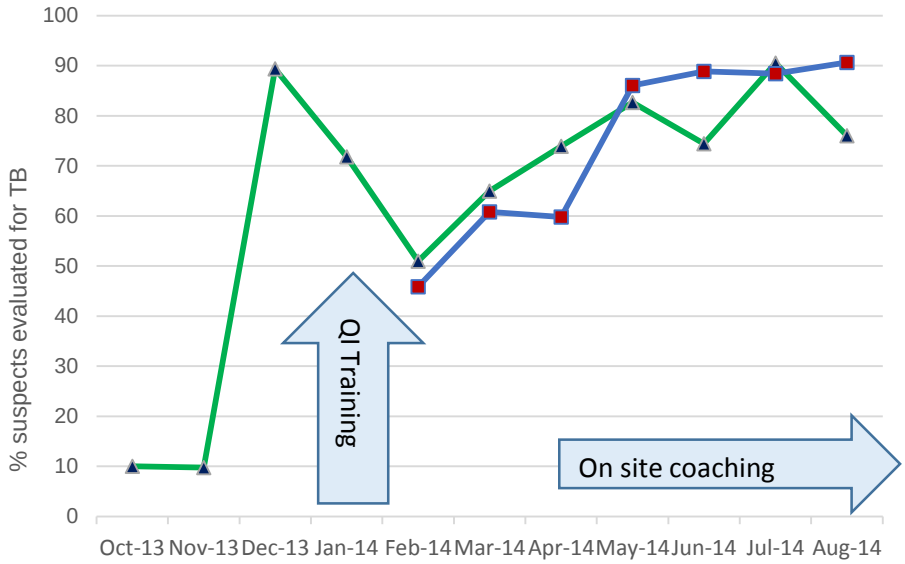
Figure 66: Uganda: Percentage of suspects evaluated for TB, 6 KCCA health facilities (Oct 2013 –Aug 2014)

Changes:

C1: TB clinic staff trained on use of presumptive register

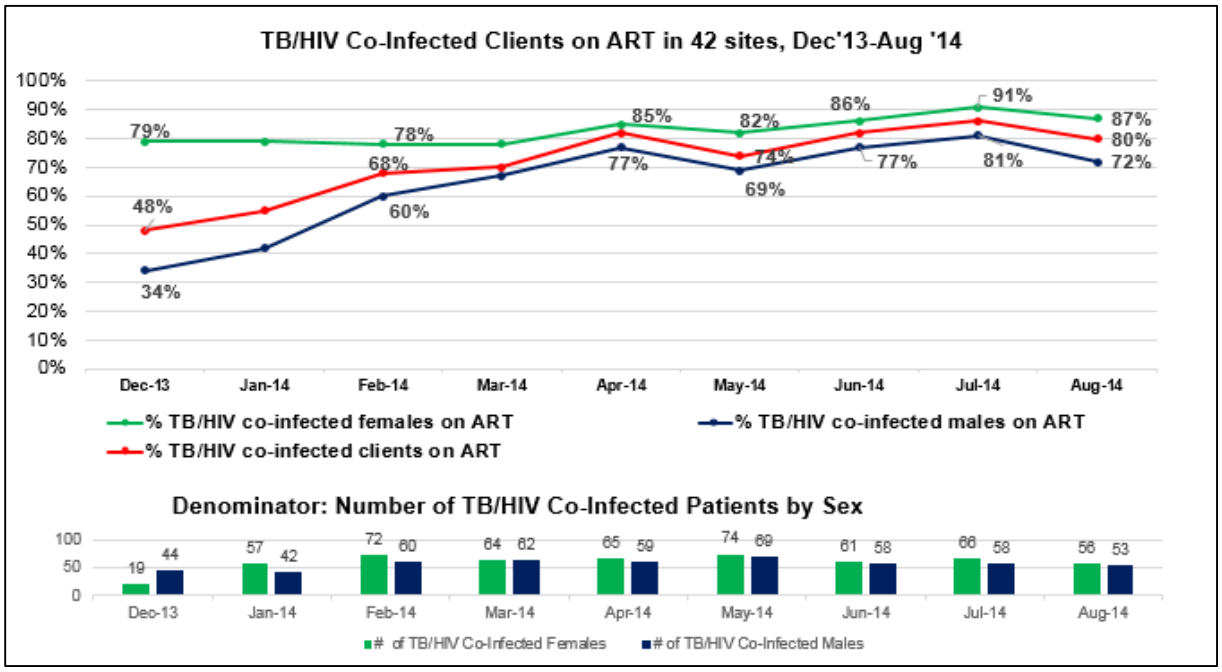
C2: Created presumptive TV point, all identified suspects to go through before it being sent to the laboratory

C3: Register assigned to staff to cross check for completeness and update where necessary



	Oct-13	Nov-13	Dec-13	Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14	Jul-14	Aug-14
Number of TB suspects evaluated for active TB	6	4	42	51	78	154	193	291	271	508	422
Number of TB suspects registered	60	41	47	71	153	237	261	352	364	561	555
% TB suspects evaluated for active TB	10	9.8	89.4	71.8	51.0	65.0	73.9	82.7	74.5	90.6	76.0
# of Sites Reporting	2	2	1	2	3	4	4	6	6	6	6
% TB suspects evaluated for active TB at Kisenyi					45.8	60.8	59.8	86.1	88.9	88.4	90.7

Figure 67: Uganda: TB/ HIV co-infected clients on ART in 42 sites (Dec 2013 – Aug 2014)



Activity 5. Improve maternal, newborn and child health

KEY ACCOMPLISHMENTS

- **Provided support to Ministry of Health – national level.**
  - As part of health systems strengthening, the MOH was supported to review the Health Management Information System (HMIS) tools to integrate data entry points to measure newborn health quality indicators that will be used to monitor the quality of newborn health care services (Q1).
  - Technical support was also provided to the MOH to quantify national needs for newborn resuscitation and training equipment (Q1). A quantification was conducted for all government health facilities and medical training institutions. The quantification needs were submitted to the World Bank Health Systems Strengthening (HSS) Project for funding and subsequent procurement.
  - National-level Born-Too-Soon Advocacy Campaign was conducted to commemorate World Prematurity Day (Q1). The objective of the campaign was to raise more awareness of prematurity and its associated consequences if not addressed and to lobby and advocate for the use and scaling up of proven interventions that can help babies born prematurely survive.
- **Conducted 3 joint learning sessions of 10 pilot and 10 scale-up Saving Mothers Giving Life (SMGL) sites.** Conducted three learning sessions for 20 sites in the 4 SMGL districts implementing MNCH QI activities. Best practices were shared for each intervention area by the participants, and a mini-change package was shared at the end of the three-day meeting. In September 2014, ASSIST conducted a learning session for 20 sites from the 4 SMGL districts. The 10 spread sites were mixed with the 10 demonstration sites through group discussions in each of the improvement objectives facilitating learning across teams. Plenary sessions were organized for input from the rest of the group members.
- **Six of ten light-supported quality improvement teams in the phase II/scale-up districts started monitoring compliance to AMTSL, partograph, and essential newborn care (ENBC) provision**. Eight of ten facilities started holding regular quality improvement meetings and identified improvement projects. There was diffusion of the quality improvement MNCH interventions from the five ASSIST-supported facilities to Bigodi health center III in Kamwenge District offering basic emergency obstetric care. The midwife at this health unit through interactions with other midwives from the quality improvement trained facilities started implementing the evidence-based interventions in January 2014. This midwife had never been trained in quality improvement nor received onsite coaching visits.
- **Conducted coaching sessions:** Conducted 9 coaching session; some were done independently by the regional and district coaching teams, and other jointly with the ASSIST team. During the joint coaching sessions, coaching skills of regional and district coaches were assessed during the site visits. Nine of thirteen trained district/regional coaches have become competent and able to support teams to improve MNCH services.
- **Conducted an SMGL quality improvement TWG meeting of implementing partners** that involved in quality improvement activities in the SMGL initiative (June 2014). The scope of work was developed and shared with the USAID SMGL coordination committee.
- **Conducted a harvest meeting (June 2014) for the SMGL-MNCH collaborative focusing on five improvement areas:** adherence to partograph use; compliance to the provision of the three components of AMTSL; provision of a complete package of essential newborn care; screening for pregnancy-induced hypertension; and conducting maternal and perinatal death reviews. Changes included: photocopiers/printers at facilities are being used to avail the partographs; partographs have been included as part of the admission forms used in maternity wards; partograph supply has been included in the tendered out items for supply at the health facilities thus reducing stock-outs of forms; and review of charts for use and completeness during the quality improvement review meetings.
- **Conducted monthly SMGL QI cluster meetings**. Coordinated four SMGL IPs implementing QI monthly meetings. QI tools have been shared, including documentation journals, reporting tools, and QIF& strategic plans with the TWG members.

RESULTS

Improvement in Key Indicators

Activity	Indicator	Baseline	Last value
Saving Mothers Giving Life	% application of AMTSL during delivery	5% (Jan 12) 10 sites	99% (Aug 2014) 30 sites
	% use of a partograph for labor monitoring	4% (Jan 12) 10 sites	72% (Aug 14) 30 sites
	% delivery of a complete package of ENC	1%(Jan 12) 10 sites	83% (Aug 14) 30 sites
	% successful resuscitation of asphyxiated babies	90% (March 13) 3 sites	93% (July 14) 10 sites
	% BP measurement of mothers during labor and delivery	94%(March 13) 6 sites	86% (Aug 14) 12 sites
	% urine dipstick testing for mothers during labor and delivery	46% (Aug 13) 1 site	76% (Aug 14) 6 sites

- By August 2014, compliance to AMTSL use improved to 99% across both the 20 sites in the original SMGL districts plus the 10 light-support sites in the spread districts. Use of the partograph has also improved across all cohorts of sites (Figure 68), as has the proportion of newborns receiving the complete essential newborn care (ENBC) package (Figure 69).

Figure 68: Uganda: Percentage of clients for which partographs are used to monitor labor in 10 pilot, 10 scale-up, and 10 spread sites (January 2012-August 2014)

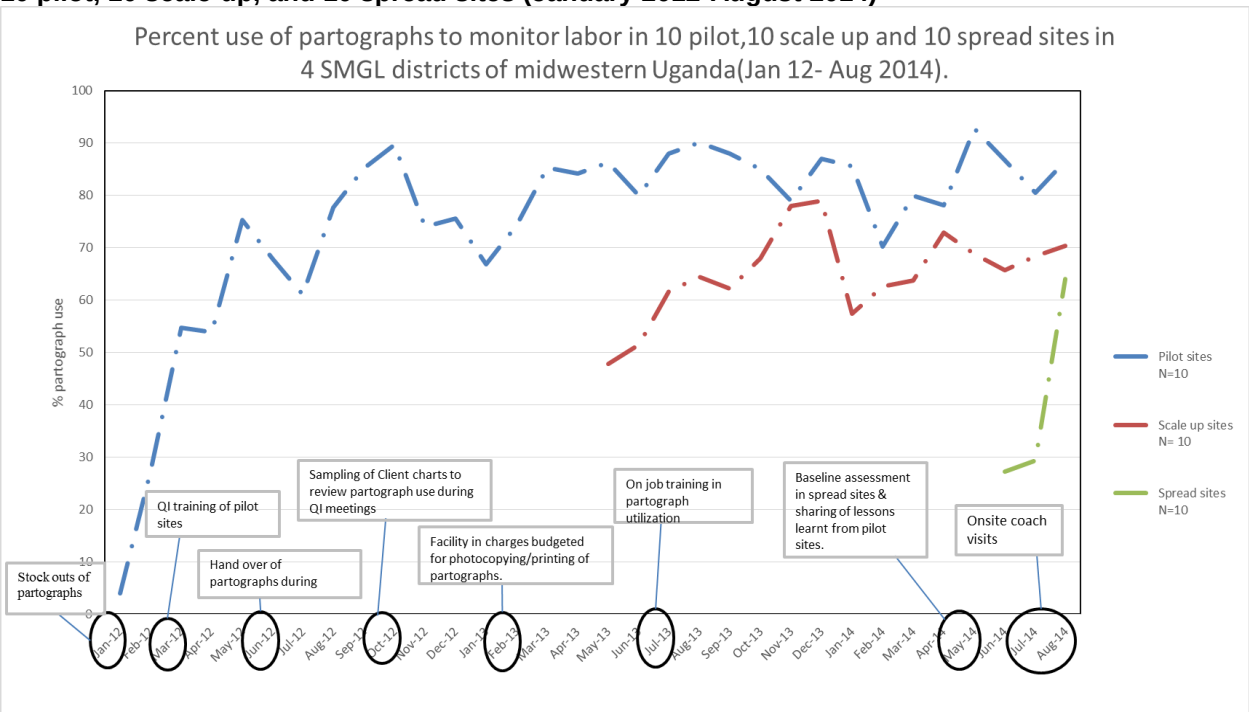
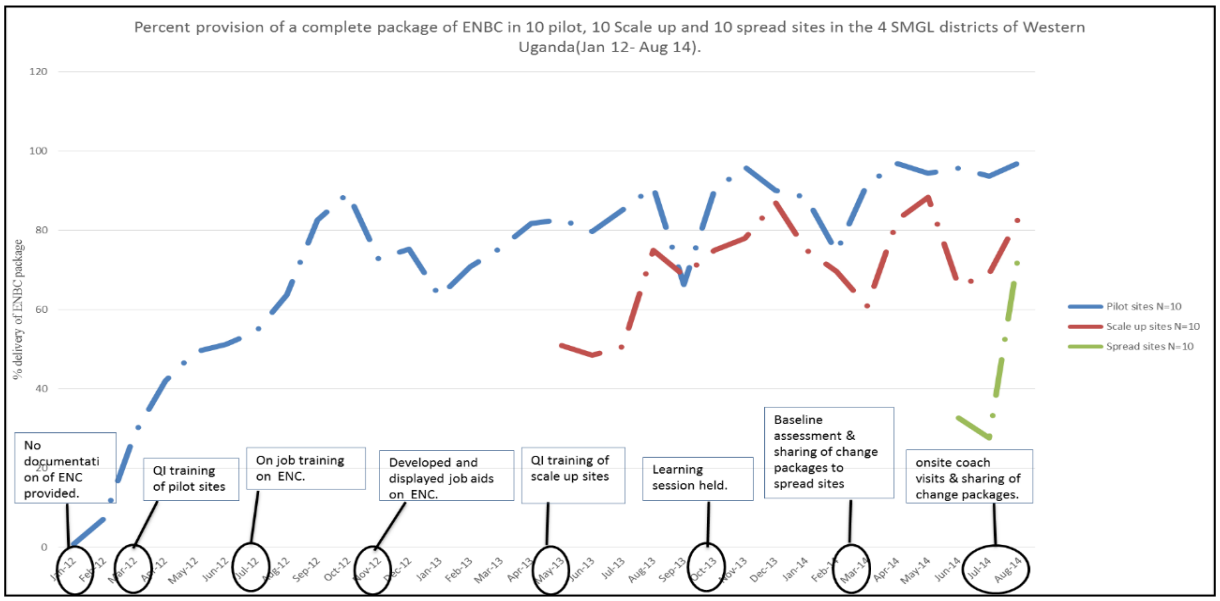


Figure 69: Uganda: Percentage of newborns receiving a complete package of ENBC in 10 pilot, 10 scale-up, and 10 spread sites in the 4 SMGL districts (Jan 2012 – Aug 2014)



Activity 6. Integrate family planning into maternal newborn and child health

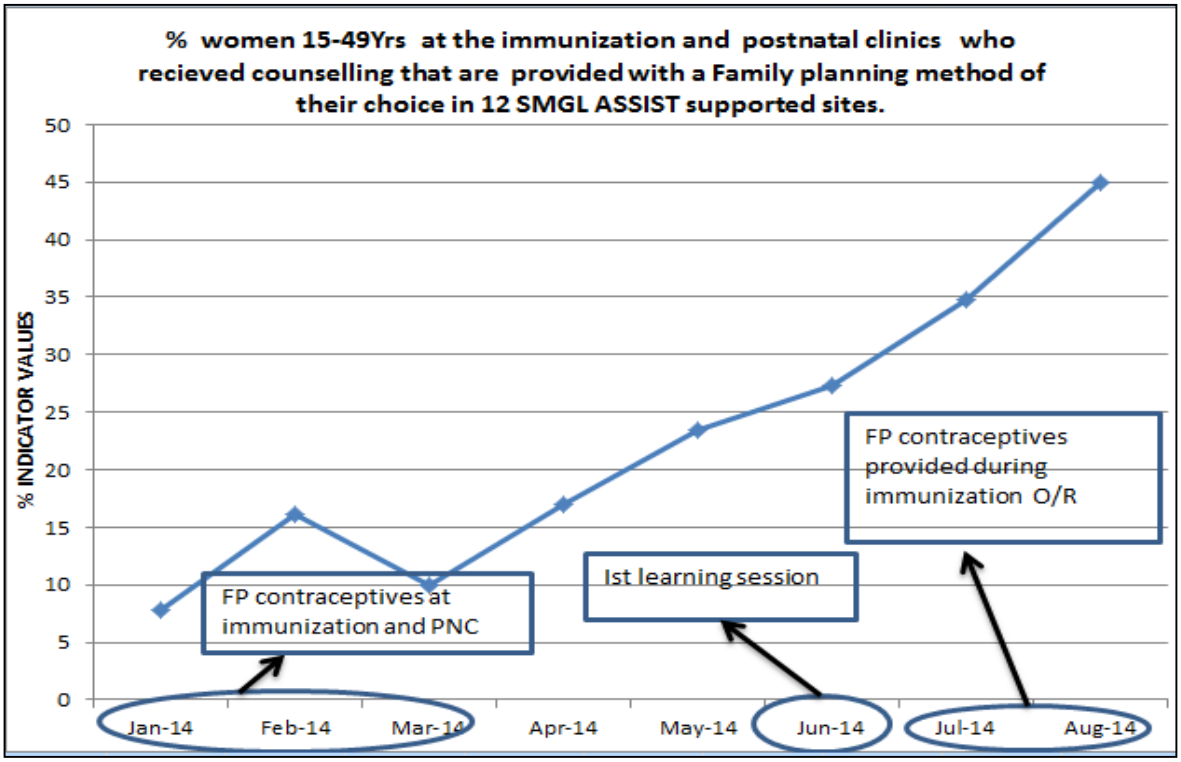
ACCOMPLISHMENTS

- **Conducted learning sessions** (Q1-3)**.** Site teams shared changes that have worked/not worked in improving the four focus areas of FP integration into MNCH care service. They discussed barriers to FP integration, solutions being tested, and other possible innovations. A list of changes tested to improve MNCH/FP integration in the 18 SMGL participating sites was generated, as well as action plans.
- **Conducted coaching visits with the District Health Teams to 18 SMGL sites** (Q2-3)**.** The coaching visits focused on supporting the sites to come up with possible interventions to improve documentation and monitor performance, address the myths and misconceptions that were affecting FP use; and address gaps in the processes of care in the integration of FP into MNCH services at maternity, postnatal care (PNC), and the Young Child Care (YCC) clinics.
- **Conducted a baseline assessment** (Q2)**.**
- **18 FP-MNCH participating sites were supported during the coaching sessions to address gaps in the processes of care in the integration of family planning into maternal newborn and child health care services at maternity, PNC, and the YCC clinics through onsite QI coaching sessions** (Q4).The major areas of focus for improvement were: appropriate referral of clients in need of family planning contraceptives not available at a given time; documentation of the improvement work; and availability of FP contraceptives. Copies of order forms for reproductive health commodities not listed on the standard form for essential medicines were issued to all sites. Site teams were reminded of the submission dates, and health center IIIs (HC III) who are under the push system were encouraged to send their orders through their respective health sub districts at the health center IVs.

RESULTS

- **Increase in percentage of women who received counselling and are provided with FP method of choice** (Figure 70).

Figure 70: Uganda: Percentage of women (15-49 years) at the immunization and postnatal clinics who received counselling and who are provided with a family planning method of their choice, 12 sites (Jan – Aug 2014)



Activity 7. Improve quality of orphans and vulnerable children (OVC) services

KEY ACCOMPLISHMENTS

- **Conducted learning sessions** (Q2 and Q3).
  - Teams were guided to select other areas for example; two teams (RUDFA and the Salvation Army) decided to work on improving sanitation among OVC households, and other two teams (Agape and Kakinga CDC) selected improving vulnerable children who receive HIV counselling and testing.
  - The sub-county community development officers (CDOs) who had formed village child protection committees to improve community participation, ownership, and management of vulnerable children at the village level shared progress made and plans for scale-up.
- **Supported the improvement of regular school attendance.** The following change was tested: Engaged vulnerable households to monitor and report their children's school attendance. In Busia, The Salvation Army introduced a change of monitoring school attendance at the school through assigned teachers and community volunteers using specially designed school attendance sheets. In Rukungiri, RUDFA tested use of interest-free loans from the social welfare fund in the village savings and loan associations (VSLA) for purchase of materials for children to attend school.
- **Supported the improvement of birth registration.** The following changes were implemented: The Salvation Army introduced cost sharing so that vulnerable households would obtain birth registration certificates at 70% of the set fees. Community dialogues have been held to inform caregivers on the importance of birth registration and the process of obtaining the certificates. VSLA meetings have been used as an avenue to encourage member households to obtain birth registration certificates, with some groups offering to buy for the most vulnerable children and providing interest free loans to members to pay for the registration certificates.
- **Supported the improvement of household economic strengthening.** To support vulnerable

households improve their social economic status, OVC service providers have supported the formation of household economic strengthening (HES) groups provided with skills to work together, save money, and generate capital for income-generating activities. The service provider teams improved follow-up and support for the groups through monthly support focused on improving members' monthly meeting attendance, saving, and other social challenges identified during their regular meetings.

- **Conducted eight coaching sessions** at 10 civil society organizations (CSOs), 26 villages and four child care institutions. At the CSOs, teams were facilitated to collect baseline, identify gaps, and test changes for the newly introduced improvement aims.
- **Conducted three learning sessions** The learning sessions involved CSOs, sub-counties representatives, Ministry of Gender, Labour and Social Development (MGLSD), and supported implementing partners (IRCU and SCORE). Teams shared changes that had been implemented over the last action period and implementation challenges.
- **Two harvest meetings** were held to systematically document changes for improving saving among vulnerable households. Documentation of the change package is currently under way to compile the changes harvested by the implementing teams.
- A one day coaches' training was held after the harvest meeting to orient 10 community development officers (CDOs) on the roles of coaches and prepare them to support scale-up of lessons learned so far in improving services for vulnerable children.
- **Facilitated MGLSD activities at the national level with a goal of sharing the progress of the quality improvement work and strengthen buy-in on the quality improvement work.**
- **Provided funds to hold the Kampala-based OVC service providers meeting (May 2014).** The meeting brought together 50 participants from the major OVC implementing partners. ASSIST made a presentation on using a quality improvement approach to improve service delivery to share experiences and results.
    - ASSIST facilitated the senior social welfare and probation officer of Rukungiri District to share results and experiences of the village child protection committees at the national OVC implementation of National Strategic Program Plan of Intervention for OVC (NSPPI -2) review meeting (June 2014).
    - ASSIST collaborated with the MGLSD to organize and conduct a field visit to Mukono District for the Permanent Secretary of the ministry (July 2014). The goal of the visit was to familiarize the Permanent Secretary with interventions to support OVC through the government structures and the community.
- **Two ASSIST Uganda technical staff participated in the OVC design content meeting held in Dar-es Salaam at the end of June.**

RESULTS

Improvement in Key Indicators

Activity	Indicator	Baseline	Last value
Improve quality of Orphans and Vulnerable Children (OVC) services	% of performance in all standards at 10 CSOs that are in green (>90%)	2% (April 2013)	54% (June 2014)
	% of OVC households saving regularly	56.5% (Apr 2013) 5 sites	88.7% (Aug 2014) 9 sites
	% of vulnerable children with birth registration	3% (July 2013) 2 sites	31% (Aug 2014) 6 sites
	% of OVC and their care givers with a known HIV status	20% (Feb 2014) 1 site	59.5% (Aug 2014) 1 site
	% of OVC households with proper sanitation	7% (Apr 2014)	52% (Aug 2014)

Activity	Indicator	Baseline	Last value
	% of vulnerable children identified and linked to services of need in the communities	4% (Aug 2013) 2 villages	49% (Sep 2014) 11 villages
	% of vulnerable children linked and received services of need in the communities	33% (Sep 2013) 7 sites	99% (Sep 2014) 10 sites
	% of children out of school re-enrolled back to school	3% (Aug 2013) 4 villages	69% (Sep 2014) 13 villages
	% of children with known families resettled	17% (Oct 2013) 1 site	66% (Sept 2014) 1 site

- **Increased percentage of vulnerable children with known HIV status:** In February 2014, Agape Nyakibale reported 20% of vulnerable children and care givers had a known HIV status; since then the team has tested several changes to increase access to HIV testing and counseling leading to an improvement of 62% by September 2014 (Figure 71).
- **Increased number of vulnerable children registered, linked, and received needed services in 24 villages.** The village child protection committees have worked with the community development officers who have mobilized resources such as scholarships and bursaries to enable children who were out of school to return to school. In Amuru, the committees were used to enforce the education by-laws set by the sub-county to ensure that all caregivers commit to providing the basics for their children to be in school. Those care givers who have been identified as critically vulnerable have been linked to community organizations and government community development funds to support them start income generation activities. This has contributed to improvement from 7 individuals identified in August 2013 to 1,470 in August 2014 (Figure 72).

Figure 71: Uganda: Percentage of vulnerable children with known HIV status, Agape Nyakibale site (Feb – Sept 2014)

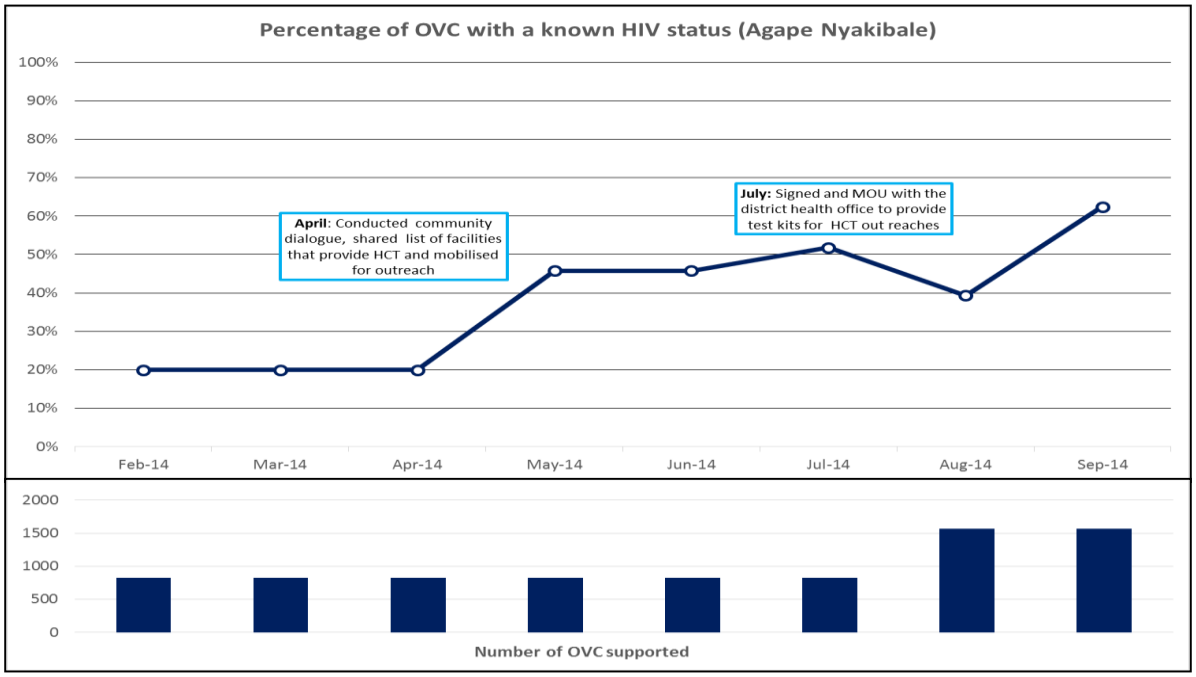
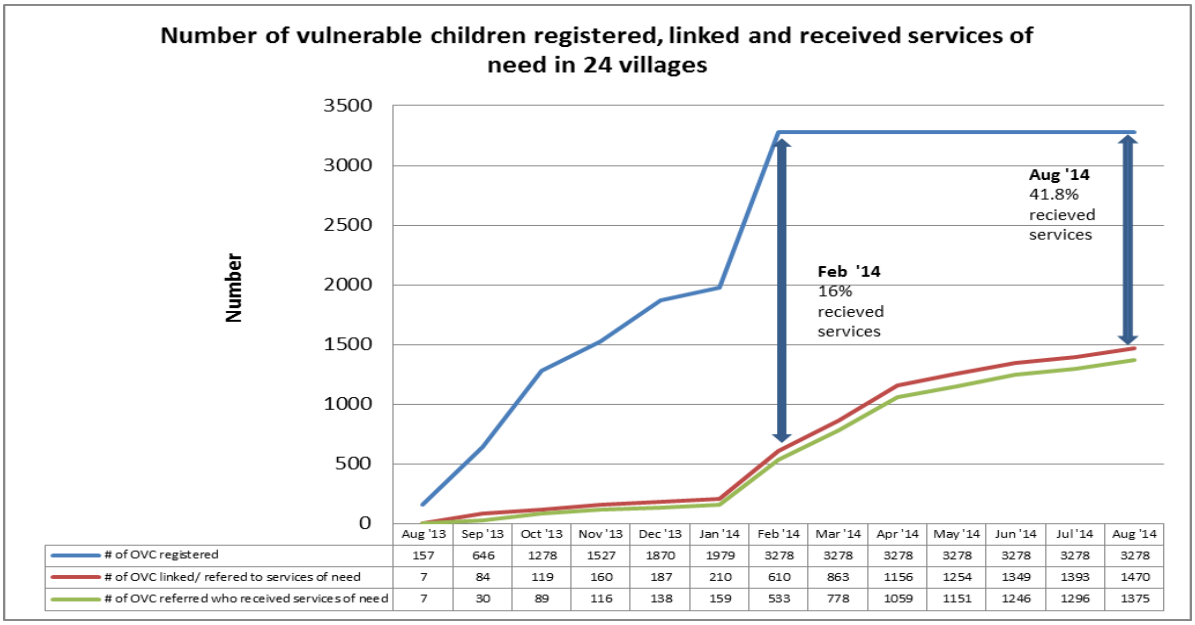


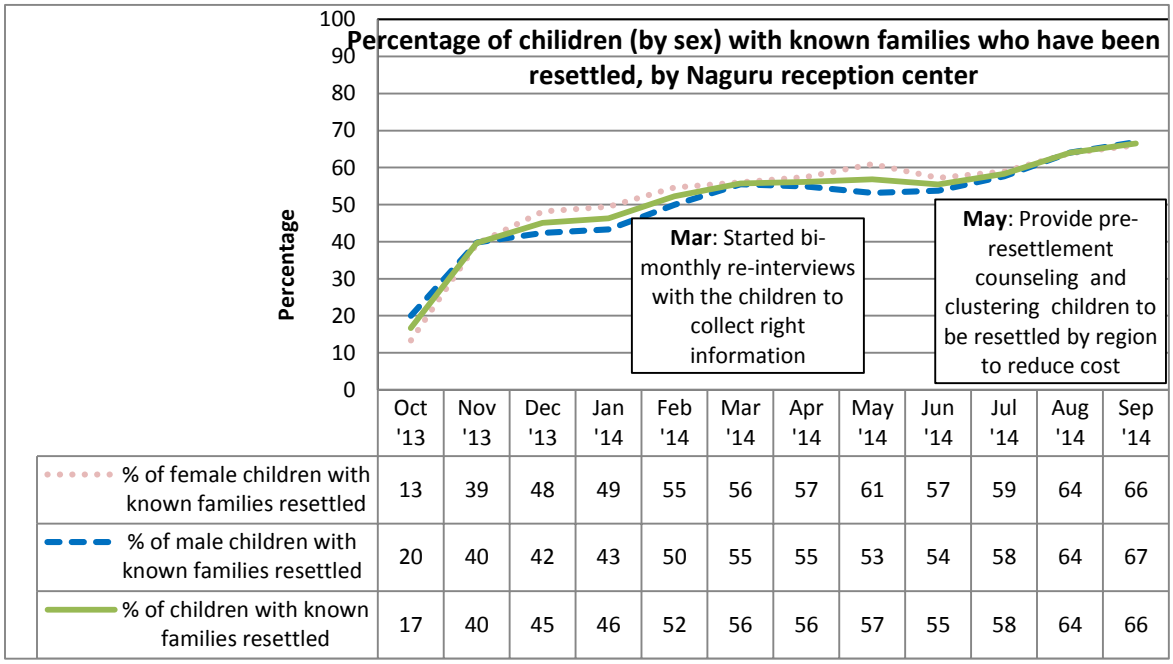
Figure 72: Uganda: Number of vulnerable children registered, linked and received services of need, 24 villages (Aug 2013 – Aug 2014)



	Aug '13	Sep '13	Oct '13	Nov '13	Dec '13	Jan '14	Feb '14	Mar '14	Apr '14	May '14	Jun '14	Jul '14	Aug '14
# of OVC registered	157	646	1278	1527	1870	1979	3278	3278	3278	3278	3278	3278	3278
# of OVC linked/ refered to services of need	7	84	119	160	187	210	610	863	1156	1254	1349	1393	1470
# of OVC referred who received services of need	7	30	89	116	138	159	533	778	1059	1151	1246	1296	1375

- Figure 73 below shows improvement at Naguru reception center. Guidance has been provided to the district probation and welfare officer to support Naguru reception center to use QI to improve services to children with aim of improving family re-unification. The children's home was assessed, quality gaps identified, and an improvement plan developed. The home have been supported to test changes to increase resettlement of children back into their communities.

Figure 73: Uganda: Percentage of children by sex who have been resettled by Naguru reception center (Oct 2013 – Sept 2014)



	Oct '13	Nov '13	Dec '13	Jan '14	Feb '14	Mar '14	Apr '14	May '14	Jun '14	Jul '14	Aug '14	Sep '14
% of female children with known families resettled	13	39	48	49	55	56	57	61	57	59	64	66
% of male children with known families resettled	20	40	42	43	50	55	55	53	54	58	64	67
% of children with known families resettled	17	40	45	46	52	56	56	57	55	58	64	66

SUSTAINABILITY AND INSTITUTIONALIZATION

ASSIST's strategy in Uganda focused on capacitating Ministry of Health structures at national, regional, district, and facility levels to make measurable improvements in quality of care. While

ASSIST has been directed to work through USG-funded implementing partners on a number of activities in Uganda, the project consistently engages MOH staff from regional and district levels in all its work to support improvement in facilities supported by implementing partners.

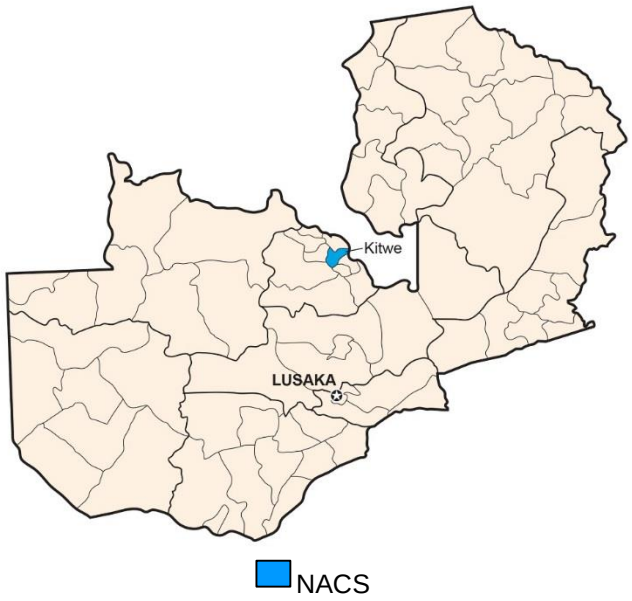
The project has also worked extensively to support the MOH in harmonizing all improvement activities with the Ministry QI Framework and Strategy and to spread the application of improvement methods beyond HIV. Jointly with the MOH Quality Assurance Department, ASSIST is support the establishment and functionality of the Rwenzori Region QIF&S structures at the regional, district, health sub district, and site levels to support improvement across all areas of care. This pilot activity will inform national-level roll-out of the QIF&S.

ZAMBIA

BACKGROUND

Building on experience supporting nutrition services for HIV clients in Uganda, Kenya, and Malawi, HCI began working with the Ministry of Health in Zambia in FY14 to integrate and scale-up nutrition services into HIV care to improve the nutritional status of HIV clients. Activities transitioned from HCI to ASSIST funding in August 2014.

Scale of USAID ASSIST's Work in Zambia



MOH, 3 Implementing Partners, 2 global partners (FANTA and LIFT)

8 facilities in 1 district

8 Quality Improvement Teams

30K out of 88k served by the 8 facilities

PROGRAM OVERVIEW

Activities	What are we trying to accomplish?	At what scale?	Improvement Activity	Activity
1. Integrate nutrition services into HIV clinics to improve nutritional status of HIV clients	• Improve management and nutritional status of malnourished PLHIV	Zambia: 8 facilities in Kitwe District, Copperbelt Province	x	

Activity 1. Integrate nutrition services into HIV clinics to improve nutritional status of HIV clients

KEY ACCOMPLISHMENTS

- **The ASSIST Improvement Specialist for NACS from Bethesda and Nutrition Advisor from Lilongwe, Malawi traveled to Kitwe in July and August 2014.** Staff accomplished several trip objectives including:
  - Met with two of the four NACS district coaches in Kitwe to discuss program priorities.
  - Conducted coaching/follow-up visits to the eight NACS sites in Kitwe.
  - Conducted first two-day learning session with representatives from all eight sites and one district coach.
- **The ASSIST Resident Advisor, with support from Bethesda-based staff, is working with the eight sites to collect baseline data and begin testing changes to improve nutrition assessment and categorization of all HIV-positive patients.** Each site has a QI team that has met at least once.
- **The Resident Advisor met with the USAID Zambia Mission's new activity manager in September 2014.**

ASIA

CAMBODIA

BACKGROUND

The health professions of Medicine, Dentistry, Pharmacy, Nursing and Midwifery in Cambodia are regulated by Councils established by Royal Decree. The establishment of the Councils is a significant achievement towards improving patient safety and quality of health care. A strong health professions regulatory system can ensure that the health professionals in the Cambodian health system meet minimum standards and are capable of providing safe, ethical and competent care that meets health care needs.

Health professions regulation is at an early stage of development in Cambodia and has some strengths such as establishment of registration systems however also has faced some challenges in fragmentation of approaches and ensuring that every health professional providing health services in the public, private or not-for-profit sectors are registered, licensed and regulated. There is a need for a national strategy to strengthen the Councils and health professions regulation system.

The USAID Mission in Cambodia has requested the USAID ASSIST Project to provide technical assistance to strengthen the health professions regulatory system and to work with the five councils that regulate doctors, dentists, pharmacists, nurses and midwives.

Scale of USAID ASSIST's Work in Cambodia

All health professions councils: Medical, Nursing, Midwifery, Pharmacists, Dentists

20,000+ health workers

PROGRAM OVERVIEW

Activities	What are we trying to accomplish?	At what scale?	Improvement Activity	Activity
1. Strengthen health professions regulation	• To be determined after the baseline assessment and stakeholder consultation	Doctors, nurses, midwives, pharmacists, dentists		x

Activity 1. Strengthen health professions regulation

KEY ACCOMPLISHMENTS

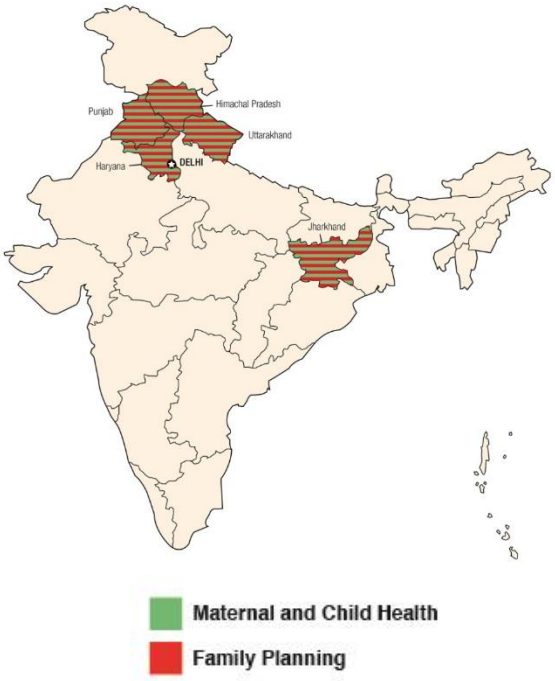
- **Conducted first scoping visit** (June 2-11, 2014): M. Rashad Massoud and Tana Wuliji met with USAID Cambodia, all the health professions' councils, the Ministry of Health (MOH), donors, and relevant key implementing partners. Meetings were informative and provided guidance for the determination of next steps towards activity design. Initially the request from USAID Cambodia was to strengthen the Medical Council of Cambodia and the regulation of physicians. However, over the course of the visit it became clear that there were economies of scale, greater gains, and stronger results to be achieved if the activity supported all health professions' councils to strengthen health professional regulation. There was agreement by USAID Cambodia and all key stakeholders to broaden the scope of the activity to cover all regulated health professionals including physicians, nurses, midwives, pharmacists, and dentists.
- **Completed baseline assessment of the health professions regulatory system** (August 2014): Data were collected for the baseline assessment by ASSIST consultants through conducting surveys of health professionals, interviews, desk review, and gathering self-assessments by councils. The objectives of the baseline assessment were to:
    1. Examine the current regulatory system and legal environment for health professionals in Cambodia against mandates described in current legislation;
    2. Identify, in consultation with stakeholders, areas where the current regulatory system meet the requirements of a well performing system
    3. Assess whether the current system and environment is "fit for purpose"
    - September 2014: Development of factsheets summarizing key baseline assessment findings.
- **Supported councils to participate in the International Association of Medical Regulatory Authorities (IAMRA) conference** (London, September 9-12, 2014). Unfortunately, only one delegate (Mr. Virya Koy, President, Nursing Council of Cambodia) was able to receive his visa in time to attend the conference. Participation in this conference was a valuable capacity building and networking opportunity.
- **Conducted preparations for the national stakeholders consultative workshop (October 13-14, 2014) to develop a five-year health professions regulatory strategy**
    - August – September 2014: Workshop program jointly designed with health professions councils and the Ministry of Health to facilitate the development a bottom-up and evidence-informed, five-year strategy that will seek to strengthen the health professions regulatory system.
    - September 2014: Over 200 representatives across the country were invited by the Ministry of Health and Councils with over 150 confirmed participants. Participants will represent health professions councils, Ministry of Health, Ministry of Education, Youth and Sports, pre-service education providers, professional associations, Provincial Health Directorates, hospitals, NGOs providing health services, donors, and health development partners.
- Mrs. Alyson Smith from Australia joined ASSIST in October as the USAID ASSIST Senior Regulatory Advisor to lead this project. She will be based in Phnom Penh from mid-November.

INDIA

BACKGROUND

ASSIST started working in India in January 2013. The technical focus of the project is the Reproductive Health, Maternal, Neonatal, Child, and Adolescent Health or "RMNCH+A" continuum. The project was tasked with working with six USAID-supported states and at least one block in each of the 30 USAID-supported districts to build improvement capability by enhancing the commitment and capability of leaders at the national, state and district levels to lead health care improvement. In addition, the project is working to develop the capacity to conduct improvement among health care workers and national, state, district, public and private facilities, and community levels along the continuum of reproductive health, maternal, neonatal, child, and adolescent health. Partners include the Government of India (GOI), Ministry of Health and Family Welfare (MOHFW), the National Rural Health Mission (NHRM), state and district governments, and key professional organizations including: National Institute of Health and Family Welfare (NIHFW); National Health System Resource Center (NHSRC); Federation of Obstetrics & Gynecological Societies of India (FOGSI); and Indian Academy of Pediatrics (IAP).

Scale of USAID ASSIST's Work in India



MOHFW, NHRM, professional organizations

263 facilities

263 Quality Improvement Teams

32 million out of 1.2 billion

PROGRAM OVERVIEW

Activities	What are we trying to accomplish?	At what scale?	Improvement Activity	Activity
1. Enhance the improvement capability in the Indian health system through conducting	• Improve care along the R-MNCH+A continuum in priority USAID districts • Develop the capacity to conduct improvement	USAID ASSIST is expected to work in all 6 USAID-supported states, and all 30 of the USAID-supported districts, and one "block" in each of the selected districts: • Delhi: 2 districts, 2 blocks	x	

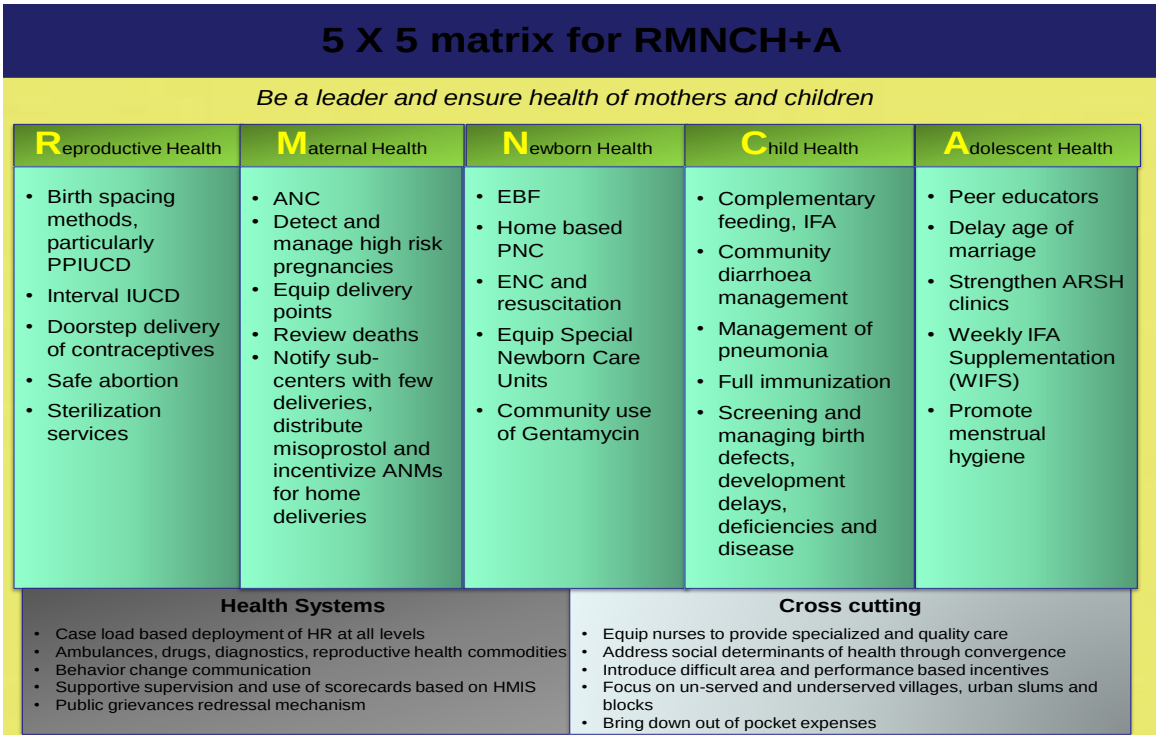
Activities	What are we trying to accomplish?	At what scale?	Improvement Activity	Activity
improvements in the "RMNCH+A" continuum in public and private entities	among health care workers at community, facility, district, state and national levels • Enhance commitment and capability of leaders at the community, facility, district, state and national levels to lead health care improvement	• Himachal Pradesh (HP): 4 districts, 4 blocks • Punjab: 5 districts, 5 blocks • Uttarakhand: 3 districts, 3 blocks • Jharkhand: 11 districts (staff placed in 6 districts) • Haryana: 7 districts, 7 blocks Total expected number of facilities: 400-500 Communities: 0 QI teams: 263 Total expected population coverage: 32M		

Activity 1. Enhance the improvement capability in the Indian health system through conducting improvements in the "RMNCH+A" continuum in public and private entities

KEY ACCOMPLISHMENTS

- **Conducted work planning with government counterparts** (September 2013): ASSIST held several meeting with government counterparts. A decision was made to work with the government to help implement the government's RMNCH+A strategy. This strategy includes the priority 25 interventions chosen by the government that they are requesting all implementing partners to support them with (Figure 74).

Figure 74: India: 5x5 matrix for RMNCH+A



- **Supported district and state officials in the development of District Action Plans and state Program Implementation Plans (PIP)** in all the districts and states in December 2013 and January 2014. Joint meetings were held with district program managers and other state consultants for the development of action plans and state PIPs.
- **Developed priorities and indicators and established quality improvement (QI) teams in 6 states** (Quarter 1): After reviewing statistics, evidence, and government priorities and consultation with experts in the first quarter, ASSIST India prioritized the following four areas to focus on in order to reduce anemia, post-partum hemorrhage (PPH), and newborn deaths:
  - Antenatal care (ANC)
  - Delivery care
  - Immediate postpartum care
  - Essential newborn care
- **ASSIST developed a list of indicators for the baseline assessment as well as a database and data collection tools.** ASSIST staff were trained on QI and use of the database. ASSIST then selected one block in each district in consultation with district officials. Criteria for selection included choosing blocks that were delivering a lot of babies, not too far from the district headquarters, and had RMNCH+A performance indicators that were close to the median for that district. Each block has a community health center (CHC), 3-4 primary health centers (PHCs), and several sub-centers. ASSIST helped establish QI teams in the CHC, PHCs, and sub-centers that were delivering babies in each block.
- **Started improvement work in hospitals, clinics, and communities** (November 2013 to February 2014). By the end of FY14, ASSIST was working with 263 teams (Table 5). Improvement teams are addressing aims related to the topic areas shown in Table 6.

Table 5: India: Numbers of improvement teams by state (Oct 2014)

States	DH	Sub DH	CHC	PHC	SC	Total
Jharkhand	6		6	13	60	85

Haryana	7	5	7	9	5	33
Punjab	5	9	6	5	28	53
Himachal Pradesh	4	3	6	7	36	18
Uttarakhand	3	2	3	5	8	21
Delhi	5		10			15
Total	30	19	38	39	137	263

Table 6: India: Number of ASSIST-supported facilities working on specific aims, by state

State	Number of ASSIST-supported facilities working on specific aims										
	ANC	Partograph	AMTSL	ENBC	Post Natal Care	PP IUCD	Neonatal Resus.	PPH Mgmt	Pregnancy-induced hypertesnion (PIH) Mgmt	Anemia Mgmt	Others
Delhi	8		14	11	4	2	9	5	7	10	0
Haryana	2	4	27	27	19					4	1
Punjab	36	11	25	39	12	6				11	
Jharkhand	3	21	25	25	22	5		5	12	2	
UK	18	7	16	14	13						
HP	18		11	11	8		8	5	7		
Total	85	43	118	127	78	13	17	15	26	27	1

- **By October 2014, ASSIST was working in most areas (shaded in blue) across the RMNCH+A continuum prioritized by the Government of India** (Table 7).

Table 7: India: Topic areas currently being addressed by facility teams supported by ASSIST (Oct 2014)

Reproductive health	Maternal health	Newborn health	Child health	Adolescent health
Focus on spacing methods, particularly postpartum IUCD	Use MCTS to ensure early registration and full ANC	Early initiation and exclusive breast feeding	Complementary feeding, IFA, nutrition	Address teenage pregnancy and contraceptive use
Interval IUCD	Detect high risk preg, ensure management	Home based newborn care through ASHA	Diarrhea management at community	Community based services through peer educators
HDC and spacing	Equip delivery pts for equitable access to EmOC	ENC and resuscitation	Pneumonia management	Strengthen ARSH clinics
Access to preg kits and strengthen abortion care	Review maternal, infant and child deaths	SNCU with trained staff and infrastructure	Immunization	Roll out national Iron plus initiative
Maintain quality sterilization services	Distribute misoprostol and incentivize ANM for home deliveries	Community level use of gentamicin	RBSK	Promote menstrual hygiene

- **ASHA community study** (Q4): A study undertaken with Accredited Social Health Activists (ASHA) who are community health workers, has been completed in two districts: Mewat in Haryana and Gurdaspur in Punjab. Preliminary findings were presented at the bimonthly meeting in August 2014. The data analysis is now complete, and a summary of the final findings is in

preparation for presentation to USAID India. At least two publications will be written up now, with the possibility of further publications at a later stage.

- Since the study examines ASHAs' work performance through a gender lens, the findings are related to their barriers and capacities that are situated within a broader family, community, and regional context having particular socio-cultural and economic dimensions. These findings are expected to be built upon to develop a community QI plan in which barriers faced by ASHAs could be addressed in a sensitive and culturally appropriate way. Furthermore, the findings will also contribute to the development of gender integration in community QI work. The next bimonthly meeting will have a separate session on the study findings and gaps that will be the basis of the gender integration community plan.

RESULTS

Improvement in Key Indicators

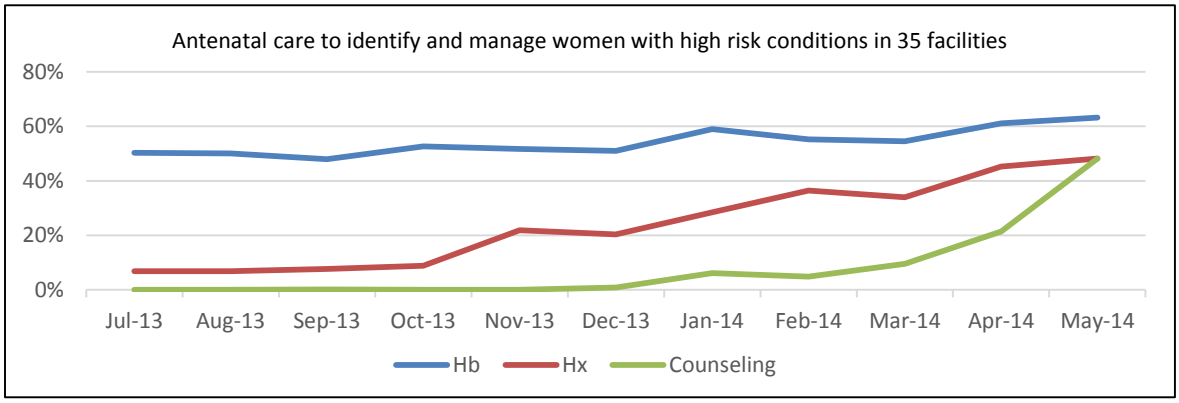
Indicators	Baseline (January 2014)	Last value (July 2014)
Proportion of newborns who were assisted for breathing out of total newborns reviewed*	17%	7%
No. of facilities reporting	58	51
Proportion of newborns made dry and provided warmth immediately after birth out of total newborns observed	47%	98%
No. of facilities reporting	56	51
Proportion of newborns who were provided sterile cutting and clamping of cord out of total newborns reviewed	47%	98%
No. of facilities reporting	56	50
Proportion of newborns breastfed within one hour of birth	87%	94%
No. of facilities reporting	69	68
Proportion of newborns given injection of vitamin K at birth	55%	98%
No. of facilities reporting	78	102
Proportion of vaginal deliveries for which uterotonic was administered within one minute of birth of baby	16%	98%
No. of facilities reporting	96	103
Average number of times vitals (both BP and pulse) checked and recorded within first 6 hours post partum	0.8	2.1
No. of facilities reporting	70	83
Proportion of ANC visits during which hemoglobin of pregnant woman was checked and documented	59%	84%
No. of facilities reporting	54	44

***Note: There were data quality issues for the indicator "proportion assisted for breathing" at the start of the project. Many sites reported proportion assessed, so we don't have a reliable baseline.*

Antenatal care

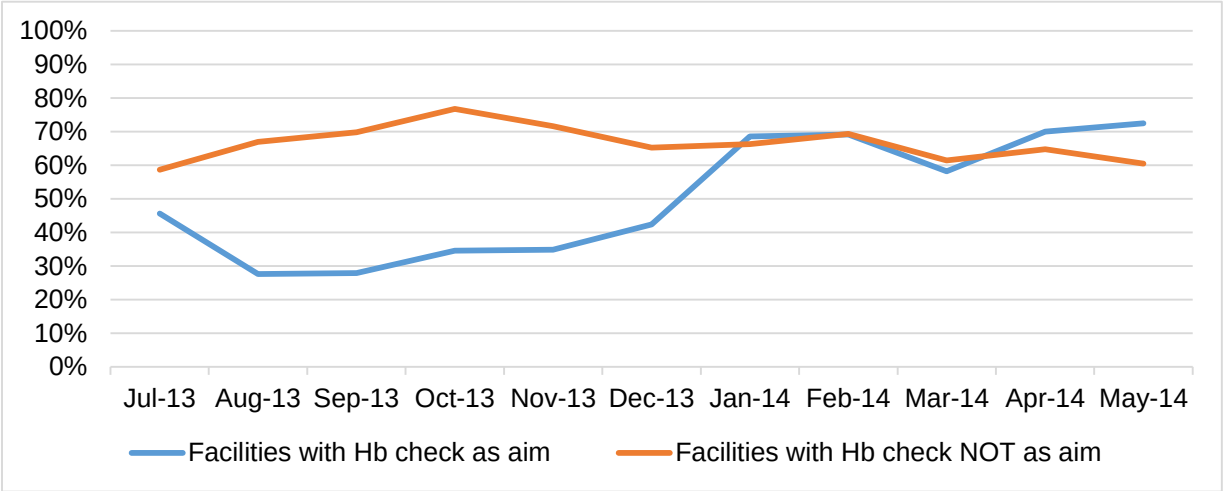
- Eighty-five sites have been working to improve antenatal care. Figure 75 shows the aggregated time series data from the 63 facilities that have more than one month of data since starting to work to improve care. The figure shows a dramatic increase in the percentage of women who have an accurate history taken and who are counseled on danger signs.

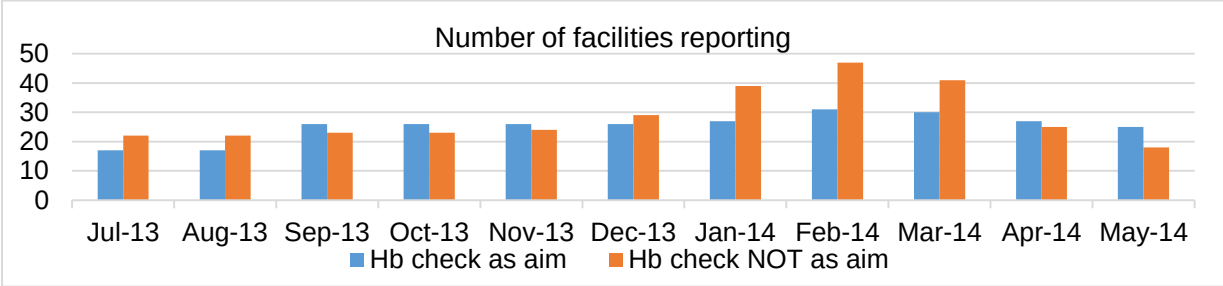
Figure 75: India: Percentage of women who received antenatal care to manage high-risk conditions, 32 facilities (July 2013- April 2014)



ASSIST looked at how performance compares between facilities with a specific improvement aim vs. those without that aim. This comparison was done to evaluate whether the change in performance was due to the fact that these teams were being observed. The period of performance was from July 2013 to May 2014. Results (Figure 76) show an increase in performance in facilities that are actively trying to improve hemoglobin measurement but not in sites that are not working to improve this. Both types of facilities are being asked to report on these data.

Figure 76: India: Comparison of results in facilities with and without the goal of improving hemoglobin measurement (July 2013-May 2014)

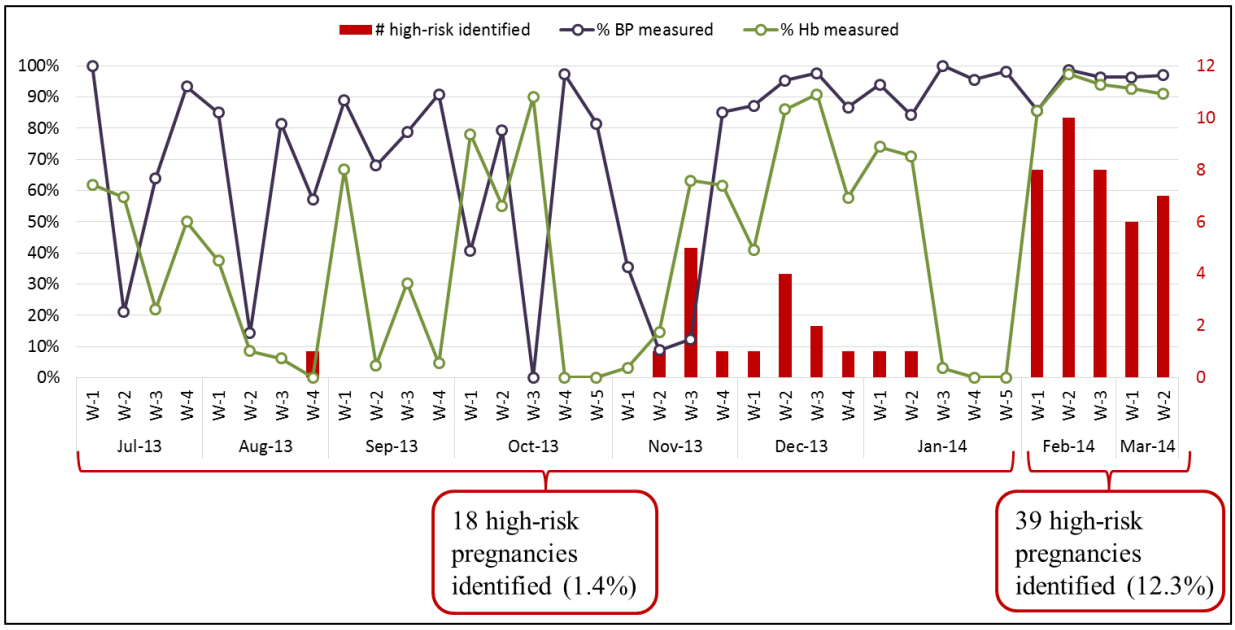




- **Provided more reliable antenatal care in Mandi Zonal Hospital, Himachal Pradesh:** ASSIST started working in Mandi in December 2013. The ASSIST district improvement coordinator (DIC) worked with health care providers in the hospital's ANC clinic to form a QI team. After looking at their data, the team realized that their clinic was not doing a good job of identifying high-risk clients. When they analyzed their current system of providing care, they

found that staff were not clear about what services to provide to patients or who should do what. Because of this, the clinic was chaotic and not reliably providing standard care. For example, before the improvement team started working, the percentage of women receiving a hemoglobin (Hb) test varied from 0 to 91% depending on the day. Most weeks, no high-risk women were identified (Figure 77).

Figure 77: India: Number of high-risk pregnancies detected and percentage of ANC's during which BP and Hb were measured in Mandi, Himachel Pradesh (July 2013-March 2014)



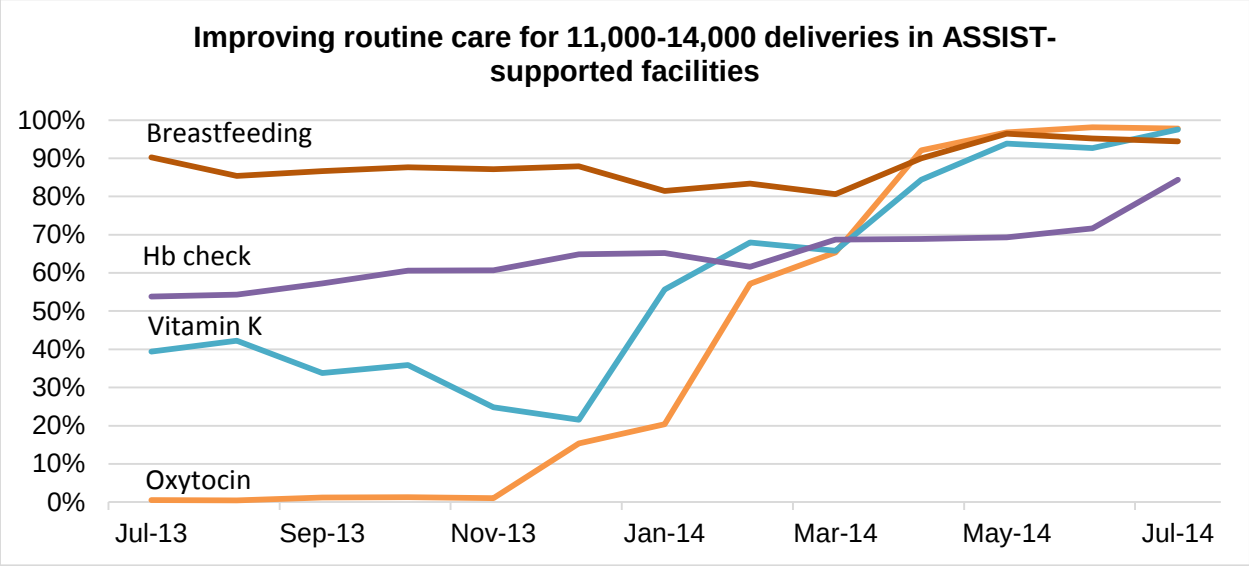
Based on their analysis of the problem, the Mandi QI team implemented four main interventions*:*

1. *On the job training about essential elements of ANC*: The DIC reviewed with the staff the government guidelines for ANC and helped make sure that all essential elements were included in their new system of care.
2. *Defining roles*: After clarifying the elements of care that needed to be provided, the team assigned roles to staff describing who should perform which tasks and also clarified how patients should move between stations. The team started using the new system in the first week of February 2014.
3. *Using standard government documentation tools*: The DIC shared with the team the Government of India ANC register which they had not previously been using. The team started using this in December 2013.
4. *Counsel clients to return from lab:* A major issue in the clinic was that patients had their hemoglobin and urine checked in the laboratory but did not bring the results back to the ANC clinic so laboratory tests were of no clinical use. To address this, the ANC recording staff started asking the women to return to the clinic with their lab test reports so that any additional actions could be taken.

Routine care

- Sites in the high-priority districts supported by ASSIST in the six states had between 11,000 and 14,000 deliveries every month during July-September 2014. There has been a progressive increase in hemoglobin measurement of antenatal women, administration of oxytocin within a minute of childbirth, administration of vitamin K to newborns, and early initiation of breastfeeding in newborns (Figure 78).

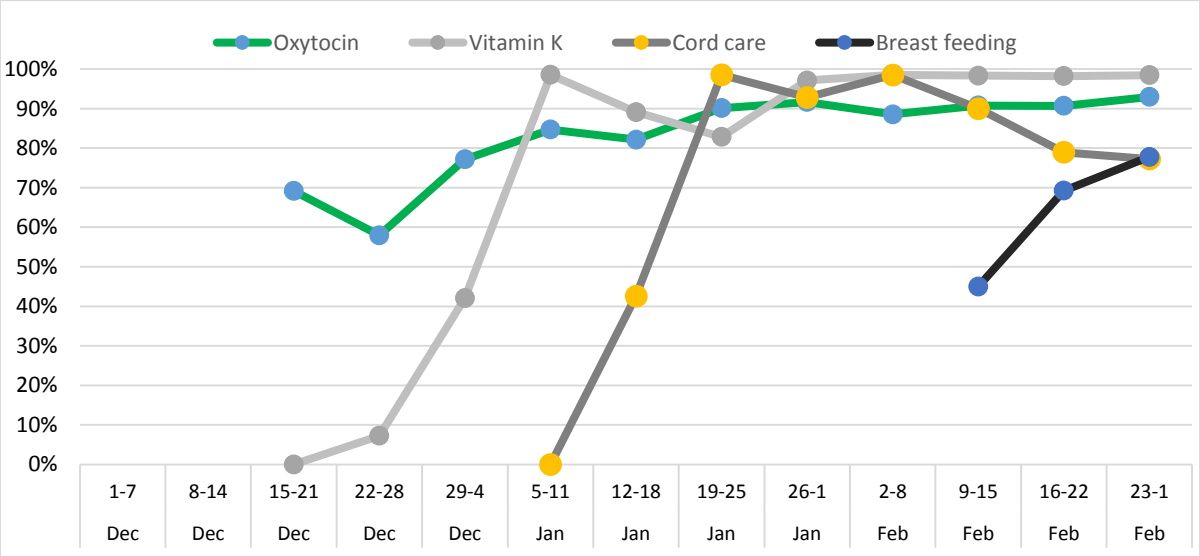
Figure 78: India: Improvement in routine care for 11,000-14,000 deliveries per month, six ASSIST-supported states (July 2013 – July 2014)



Essential newborn care

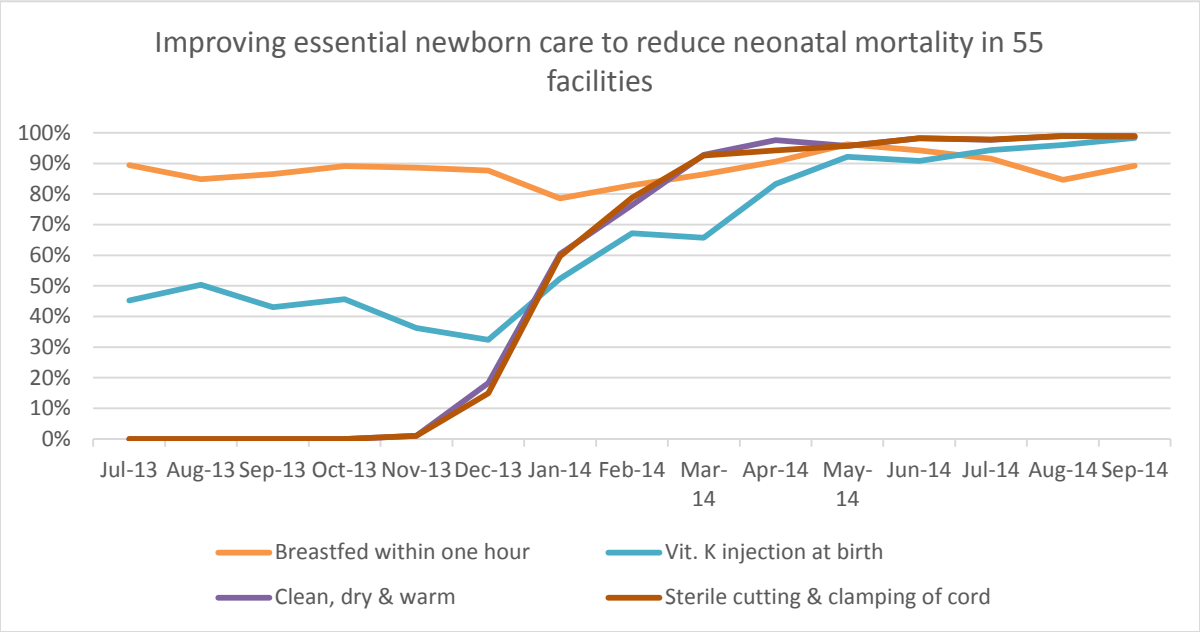
- Conducted improvement work in Godda Hospital (Q2): Godda District Hospital is a 46-bed hospital serving a population of 1.3 million. It is staffed by 8 medical officers, 10 staff nurses, and 11 auxiliary nurse midwives. The labor and delivery room is staffed by 8 staff nurses and delivers approximately 12 women per day. As part of the government's RMNCH+A initiative, the hospital is striving to improve maternal and newborn care. The hospital's initial focus was to reduce PPH by ensuring that all women receive oxytocin immediately after they deliver their babies and to ensure that all babies receive essential newborn care (ENC). Within three months the hospital saw a substantial decrease in PPH and an increase in the number of neonates receiving the elements of ENC through oxytocin administration (Figure 79).

Figure 79: India: Performance on oxytocin administration and elements of essential newborn care in Godda District Hospital, Jharkhand (Dec 2013-Feb 2014)



Fifty-five facilities have been working to improve essential newborn care. They are seeing improvement in the number of babies receiving cord care and Vitamin K and who are warmed and dried following delivery (Figure 80).

Figure 80: India: Percentage of babies receiving essential newborn care, 55 facilities (July 2013-April 2014)

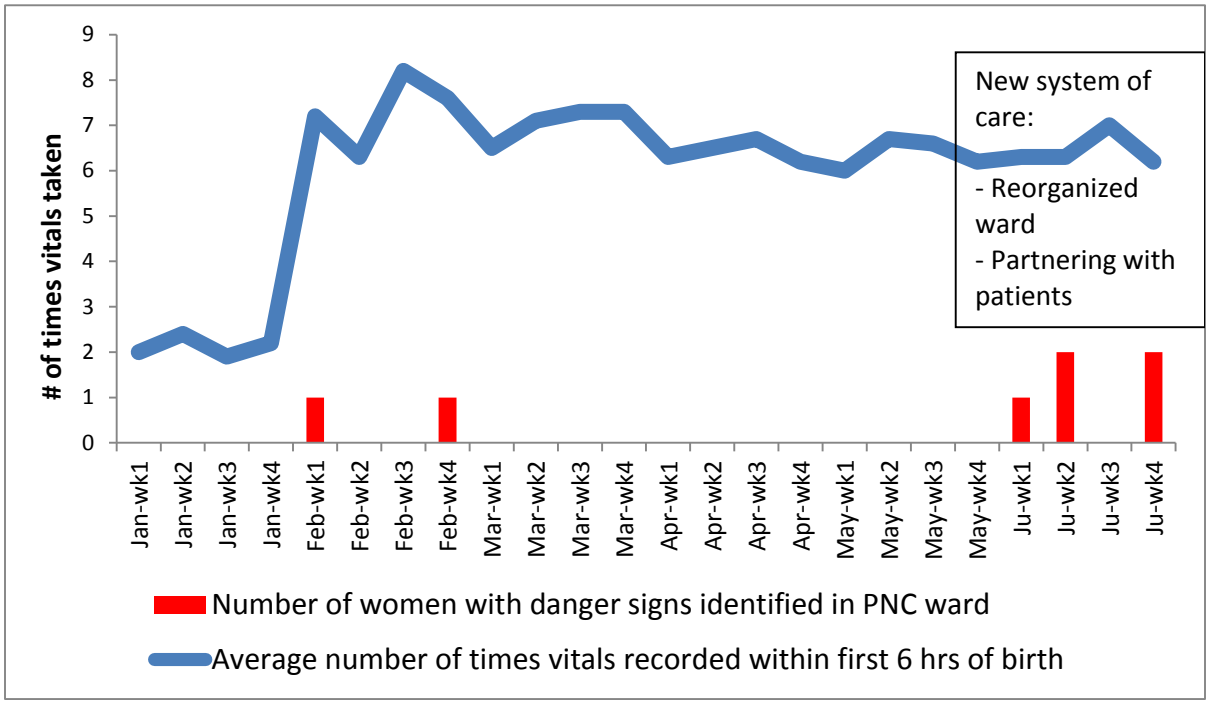


Postpartum care

- Bhagwan Mahavir Hospital is a secondary care, 250-bed hospital providing care to a largely low-income urban population in Delhi. In 2013, the hospital delivered 5854 babies and had five maternal deaths in the post-partum period, including two in December 2013. Because of this, when ASSIST started working with them, they wanted to develop a better system for monitoring women in the post-partum period. After collecting baseline data, they found that women were only being assessed twice in the first six hours after delivery. They decided to increase the number. The medical superintendent sent a letter to the labor and delivery room stating that women had to have six assessments in the first six hours. The labor room staff interpreted the letter to mean that women had to stay in the labor room for six hours. This led to huge overcrowding in the labor room. When the QI team met a week later they clarified that the women could be moved out of the labor room and the monitoring could happen in the post-partum care ward. This was clarified with all staff. These changes meant that women had more frequent visits from the nurses and more frequent monitoring. Despite this increase in monitoring, in the four months after the change, only 2 of 1513 (0.13%) women were identified as having complications after delivery, and these women were identified at a very late stage (one was seizing and one had bled copiously). The team decided that they would focus on making the monitoring system more effective at picking up women early. They felt that the main barrier to identifying women early was the work load, so they decided to try two changes to make the monitoring more efficient so that they would have more time to do careful assessment of the women. The changes were: 1) having all women spend the first six hours after delivery in a dedicated room (to save time on walking around the ward, finding equipment, etc.) and 2) teaching family members about what danger signs to look for and when to contact a nurse. They tried this new system for two days and learned that these changes made it easier to do the work and that they seemed likely to lead to improved care.

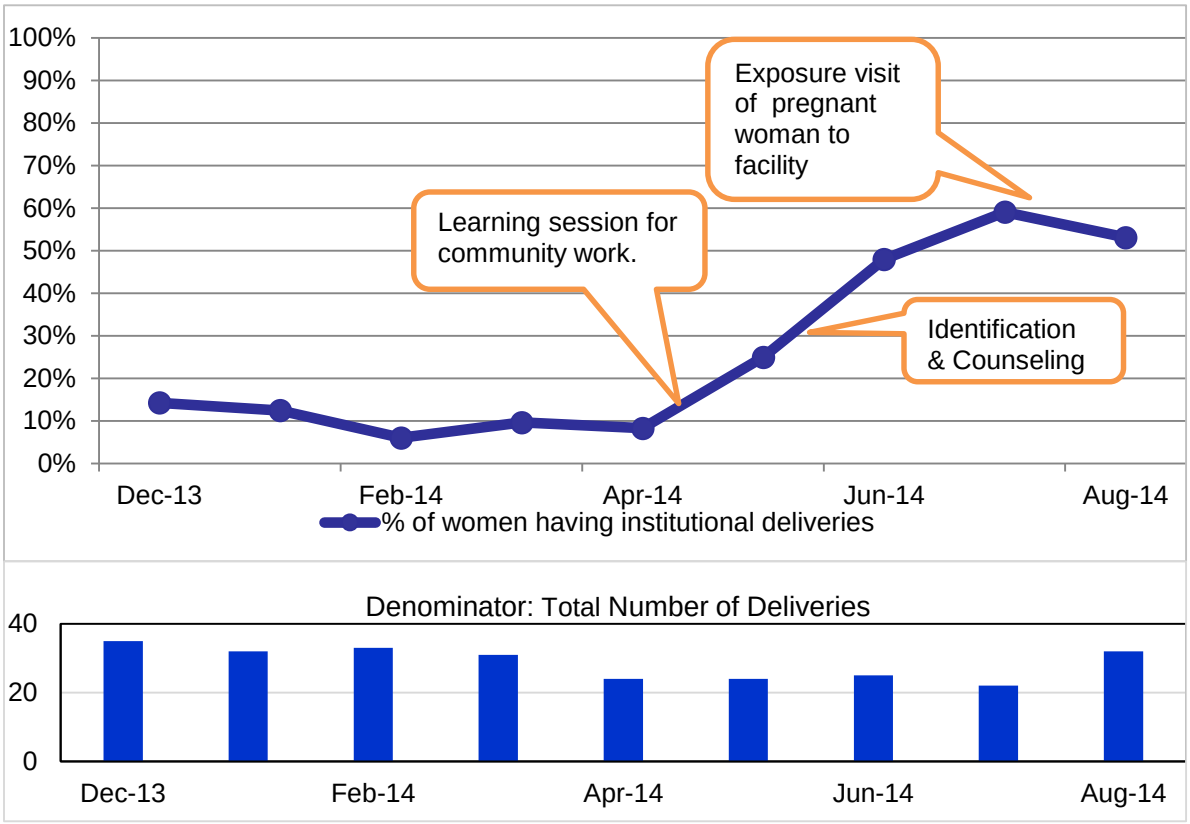
  This new system led to five women out of 318 (1.6%) being identified with complications in the first four weeks of the change. As seen in Figure 81, these changes led to a reliable system of monitoring vital signs six times in the first six hours post-partum.

Figure 81: India: Average number of times vitals (both BP and pulse) checked and recorded within first 6 hours post-partum in a Delhi hospital (Jan 2014– June 2014)



- **Community level improvement for facility deliveries** (Q4): Since July 2014, the community improvement program is operational in 9 districts supported by ASSIST. The following is an example of the progress made in one of the districts located about 90 km away from Delhi.
  - The village Salaheri in Haryana State has a population of 6,973, with ASHAs supporting facility-based auxiliary nurse midwives (ANMs). The expected number of deliveries per month in this particular village is about 30. A village QI team consisted of ANMs, ASHAs, and community social workers (known as anganwadi workers (AWW)) was formed. The aim this team chose was to increase facility deliveries from 10% to 60% in three months (Figure 82). The QI team introduced specific changes to improve institutional delivery in this specific village, including: 1) Identification of pregnant women with expected delivery in the month and their group counseling by ASHAs and AWWs, followed by multiple visits by the latter to the individual pregnant women; 2) the pregnant women who seemed reluctant to ASHAs and AWWs were visited by ANMs; and 3) providing an exposure visit to the labor room and health facility for identified pregnant women.
  - After the changes were introduced, the proportion of women delivering in health facilities increased from only 14% to more than 50% within three months. The QI team in this community decided to increase institutional delivery to 100% in the next three months.

Figure 82: India: Percentage of women who had institutional deliveries out of total deliveries in Salaheri village (Dec 2013-Aug 2014)



SUSTAINABILITY AND INSTITUTIONALIZATION

Despite only working at the facility level for less than a year, the state and district governments that ASSIST is supporting are starting to become more interested in using improvement science to reach their health goals. Three districts have requested ASSIST to help them spread to other blocks and have committed to using their resources for this work. The most advanced is Chamba District, Himachel Pradesh. At the request of the Chief Medical Officer in the district, ASSIST will train nine health supervisors and two block medical-officers-in-charge in improvement methods. The district will then support the health supervisors to visit the 38 facilities in their district regularly for improvement coaching, will include reports from the quality improvement teams in all monthly district meetings, and will fund the 38 facilities to meet quarterly for learning sessions. Lohardaga and Sareikela districts in Jharkhand have also asked for support to scale up quality improvement activities.

INDONESIA

BACKGROUND

In January 2014, USAID ASSIST began working with the University of Indonesia to conduct a mid-term and end-line 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 (*Komisi Akreditasi Rumah Sakit* or KARS). The baseline study was conducted under HCI in 2013.The midline phase of the study will be conducted throughout 2014 entirely under the USAID ASSIST Project.

PROGRAM OVERVIEW

Activities	What are we trying to accomplish?	At what scale?	Improvement Activity	Activity
1. Hospital Accreditation Process Impact Evaluation (HAPIE)	• Evaluate the quality of care provided in hospitals undergoing Joint Commission International and Indonesian Hospital Accreditation Commission (KARS) accreditation	9 hospitals have been selected in three provinces. 3: JCI accreditation 2: KARS accreditation 4: later renewal of accreditation under KARS – not seeking accreditation until 2015		x

Activity 1. Hospital Accreditation Process Impact Evaluation

KEY ACCOMPLISHMENTS

The goal of the study is to determine if there was any difference in the change in selected indicators of hospital performance from baseline to end line among the nine hospitals and if those differences were related to the type of accreditation they had undergone in the period between baseline and midline.

One of the key accomplishments over the period was to complete review of the data collection tools and make changes where needed from the tools used at baseline. This was accomplished before mid-line data collection began in June 2014. The second major accomplishment in FY2014 was the completion of primary data collection in all of the nine participating hospitals. This was completed in September.

RESULTS

The team from Universitas Indonesia Center for Family Welfare (UI-CFW) completed primary data collection and data entry in September 2014 under the guidance of the ASSIST R&E Director. The team secured approval for this second phase of data collection from each of the hospitals by visiting them in person and organizing time for key staff to be available for interview. Data collection proceeded in a timely manner without any significant deviations from plan.

Analysis of the midline data, which will include a comparison to the baseline results, will continue into the second quarter of FY15.

EUROPE AND EURASIA

GEORGIA

BACKGROUND

Building on work carried out under HCI, USAID ASSIST is working with the Ministry of Labor, Health and Social Affairs (MOLHSA) and other stakeholders in Georgia to address quality, consistency, and continuity of medical care; to improve access to and use of evidence-based medical information by physicians; and to enhance the availability of modern evidence-based treatments in the Imereti region. The project is supporting referral and primary care facilities to improve the quality of cardiovascular disease, asthma, pneumonia, and chronic obstructive lung disease prevention and treatment. We are also supporting private providers and insurance schemes to adopt evidence-based clinical protocols. Activities in FY14 were primarily funded under HCI until the last quarter of FY14, when ASSIST funding predominated.

Scale of USAID ASSIST's Work in Georgia

MOLHSA, 15 Implementing Partners

20 facilities

19 Quality Improvement Teams

154,683 out of 4.5 million (amb)
1,295,000 out of 4.5 million (hosp)

PROGRAM OVERVIEW

Activities	What are we trying to accomplish?	At what scale?	Improvement Activity	Activity
1. Improve quality, consistency, and continuity of medical care	• Improve timeliness, continuity, effectiveness, efficiency, patient-centeredness of provided services and their consistency with clinical guidelines through 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 (HIS) 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 Imereti region	Facilities: Demonstration phase is taking place in: - Imereti (1 out of 11 regions of Georgia) - 3 (out of 40) hospitals - 4 (out of 42) polyclinics - 13 (out of 212) village doctors - 19 QI teams. This region has a population of 699,890	x	
2. Improve access and use of evidence-based medical information and treatments	• Improve access to evidence-based medical literature (guidelines, manuals, pathways, protocols) of Georgian physicians • Enhance the use of evidence-based clinical guidelines, protocols, and pathways in clinical practices • Strengthen capacity of professional associations in developing and adapting international guidelines and evidence-based literature to Georgian context	Dissemination of evidence for priority conditions to all physicians countrywide		x

Activity 1. Improve quality, consistency, and continuity of medical care

KEY ACCOMPLISHMENTS

- **Integrated gender in quality improvement activities**: With support of Dr. Taroub Faramand (WI-HER LLC), the project took various steps to ensure that men and women in collaborative improvement facilities receive equal care. Specifically, with support from Dr. Faramand at the 8th

regional learning session, conducted on February 13-14, 2014 at Kutaisi National Medical Centre, the USAID ASSIST team oriented participants about gender issues. Presenting sex-disaggregated data from different sources (population level data, results of medical chart audit, patient and provider interviews conducted under HCI) led to group discussions about specific changes QI teams plan to implement in their health care processes to reduce the disparity in cardiovascular disease risk factor screening and modification practices between men and women.

  - To identify and respond to any gender gaps in CVD risk factor screening and modification practices, the HCI and ASSIST projects also collected and analyzed sex-disaggregated data from two different sources: 1) routine monitoring of medical charts and 2) the study of Effectiveness and Cost-Effectiveness Assessment (ECEA) of QI interventions. Based on the identified needs, during site visits and learning sessions, the project team is supporting facilities to implement gender-sensitive interventions to address these gaps.

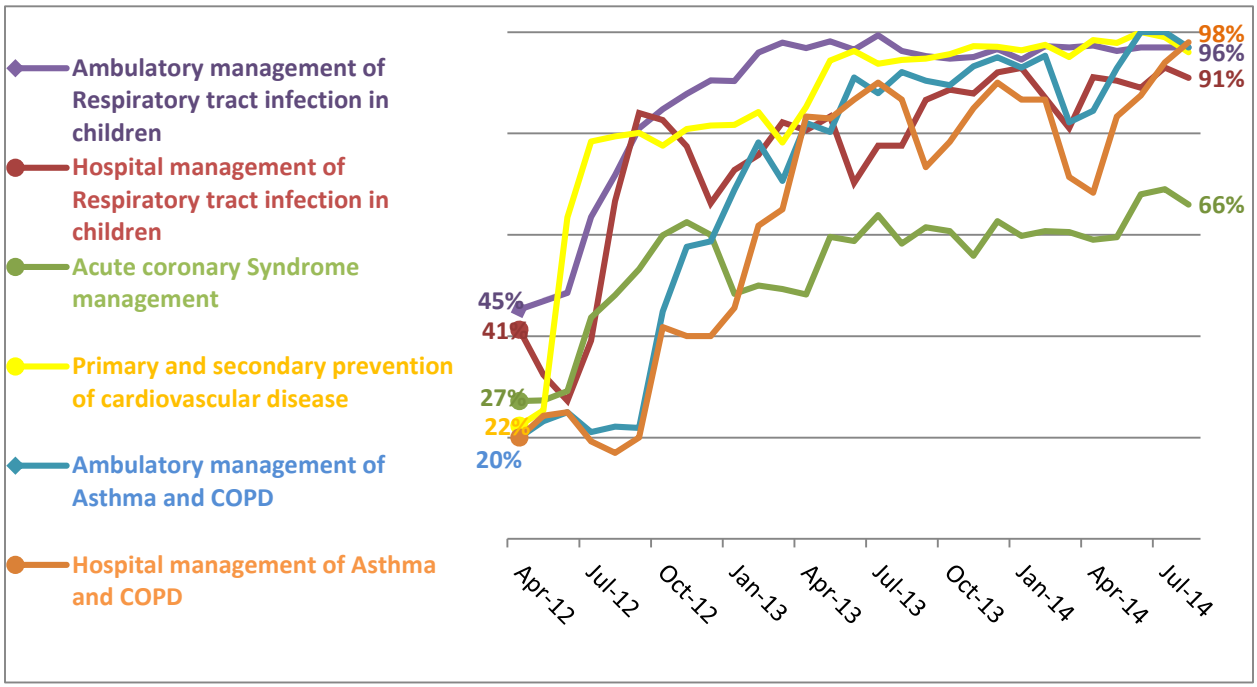
- **Continued clinical, quality improvement, and other needs-based training and coaching of project-supported medical facilities.** During July – September 2014, the project team continued providing support to quality improvement teams of facilities in the Imereti Region to test and implement changes in their care processes and to improve prevention and treatment of cardiovascular disease (CVD), asthma, chronic obstructive pulmonary disease (COPD), and respiratory tract infections (RTIs). (Note that activities in Georgia during the 4th quarter of FY14 also received funding through HCI.) During the reporting period, the ASSIST Georgia team conducted three field trips and 488 provider-hours of training, including: 52 provider-hours in quality improvement; 185 provider-hours in CVD risk factor screening and modification; 72 provider-hours in acute coronary syndrome (ACS) management; 158 provider-hours in pediatric RTI management; and 21 provider-hours in asthma/COPD management.
- **Used diversified methods of training to respond to quality improvement teams' needs:**
  - On August 1, 2014, USAID ASSIST expert Dr. Ivane Chkhaidze conducted a workshop with open consultation (directly observed consultation practice) at the village Nabakevi Primary Health Care Center in Samtredia District. Pediatricians and family doctors from Samtredia hospital, Kutaisi #3 children polyclinic, as well as village doctors from Samtredia and Terjola-Tskaltubo districts participated in this workshop.
  - On September 4-6, 2014 USAID ASSIST experts conducted training in CME courses in diagnosis and management of hypertension, assessment and management of ischemic heart disease (IHD), coronary artery disease (CAD), and hospital management of ACS and COPD exacerbation for project-supported medical facilities. Fifty-five providers from project-supported facilities (out of 60 participants) who successfully passed the exam (pre- and post-testing) received CME credits and certificates from the Georgia ASSIST Project and relevant professional associations.
- **With the support of ASSIST headquarters' research and evaluation team, the project is conducting a study to assess the effectiveness, cost-effectiveness, and efficiency of the quality improvement interventions in ambulatory and hospital facilities.** Currently, the project continues analysis of the assessment data and is collecting necessary information for the cost analysis. Brief reports and/or articles in each priority clinical area are under development to share learning at national and international levels.

RESULTS

- After 28 months of QI interventions, routine monitoring shows sustained improvement of best care practices in all project priority clinical areas from April 2012 (baseline) to August 2014 (see Figure 83). Average compliance with evidence-based best practices on screening, prevention, and management of CVD risk-factors reached 98%; this represents an increase of 76 percentage points from baseline;
- Average compliance with standards for management of acute coronary syndrome improved by 39 percentage points;
- Average compliance with RTI management best practices in children in intervention ambulatories and hospitals improved by 51 and 50 percentage points, respectively;

- Average compliance with asthma and COPD management best practices in ambulatories and hospitals improved on average by 78 and 76 percentage points, respectively.

Figure 83: Georgia: Average compliance with process indicators per clinical focus area, Imereti (April 2012 – Aug 2014) *(average n=343 monthly charts reviewed)*



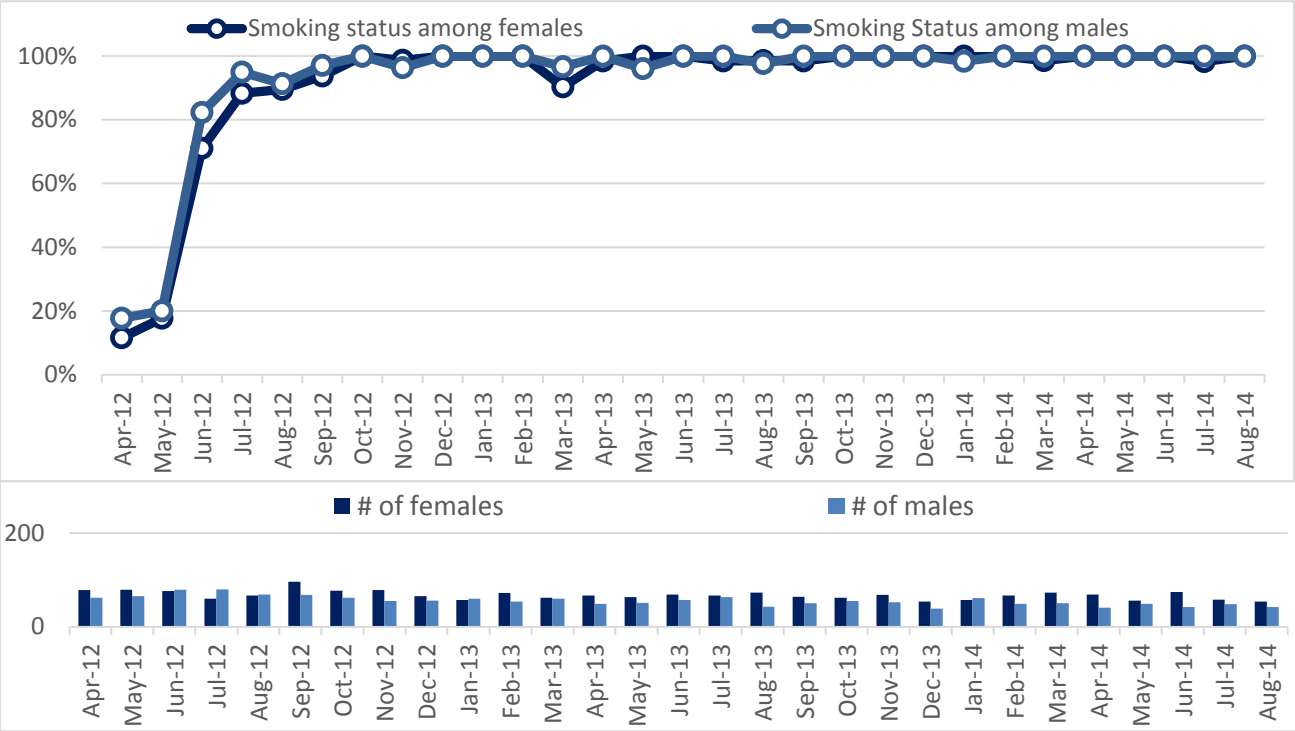
- **Results of gender integration activities in quality improvement**
  - Improved tobacco screening, counselling, and patient awareness: After 18 months of improvement interventions, the intervention facilities demonstrated improved chart documentation of tobacco status and awareness of its negative influence on children's and family members' health among both women and men (Table 8).

Table 8: Georgia: Sex-disaggregated results for smoking status assessment and patient awareness of smoking dangers (April 2012 – Oct 2013)

Data Source	Indicators	Male or Female	Intervention Baseline (April 2012)	Intervention Endline (Oct. 2013)	Difference (%)
Chart reviews	Documentation of tobacco status	Male Female	2% (1/64) 0% (0/66)	91%(53/58) 91% (68/75)	89 91
Patients interviews	Agrees that there are effective treatments to help motivated individuals stop smoking	Male Female	33% (14/43) 31% (30/98)	70% (37/53) 65% (61/94)	37 34
Patients interviews	Knows that smoking greatly increases persons and their children's/family members risk of asthma attack	Male Female	72% (31/43) 58% (57/98)	96% (51/53) 99% (93/94)	24 41

  - Routine monitoring fully coincides with the results of cost-effectiveness assessment. As shown in Figure 84, some sex-related differences between men and women were apparent at the beginning of our intervention but for almost two years, performance has been sustained at above 90% level compliance without gender-related differences.

Figure 84: Georgia: Smoking status documentation disaggregated by sex in three polyclinics and 13 village practices (April 2012 – Aug 2014)



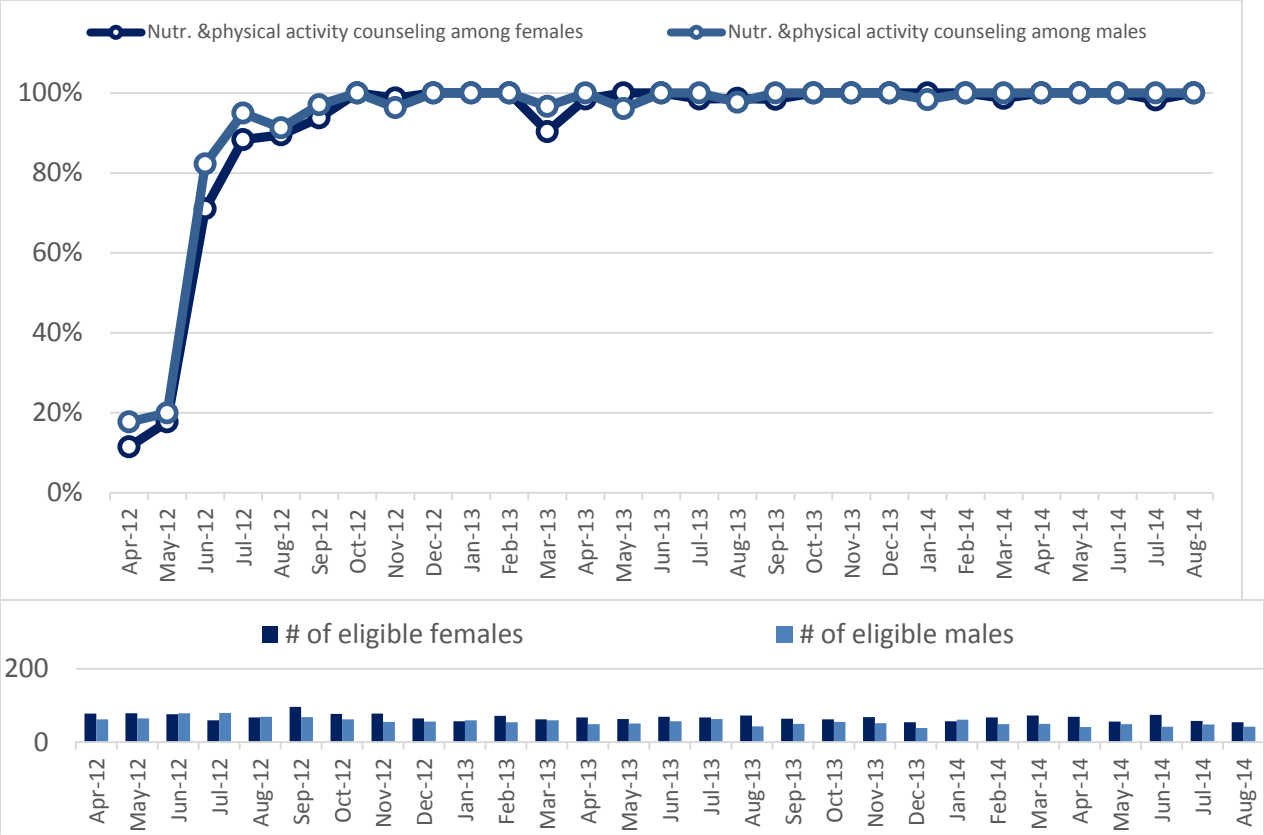
- **Improved physical activity assessment and counselling**: After 18 months of improvement interventions, intervention facilities have shown improved chart documentation of physical activity assessment and counselling, particularly among women (Table 9).

Table 9: Georgia: Sex-disaggregated results of unhealthy eating, lack of physical exercise, and excess weight (April 2012 – Oct 2013)

Data source	Indicators	Male or Female	Intervention Baseline (April 2012)	Intervention End line (Oct. 2013)	Difference (%)
Chart reviews	Physical activity status last year	Female Male	2% (1/66) 3% (2/64)	99% (74/75) 100% (58/58)	97 97
Chart reviews	Physical activity counseling last year	Female Male	3% (2/66) 8% (5/64)	99% (74/75) 98% (57/58)	96 90
Chart reviews	Documentation of nutrition and physical activity counseling during last 12 months	Female Male	2% (1/66) 3% (2/64)	99% (74/75) 100% (58/58)	97 97

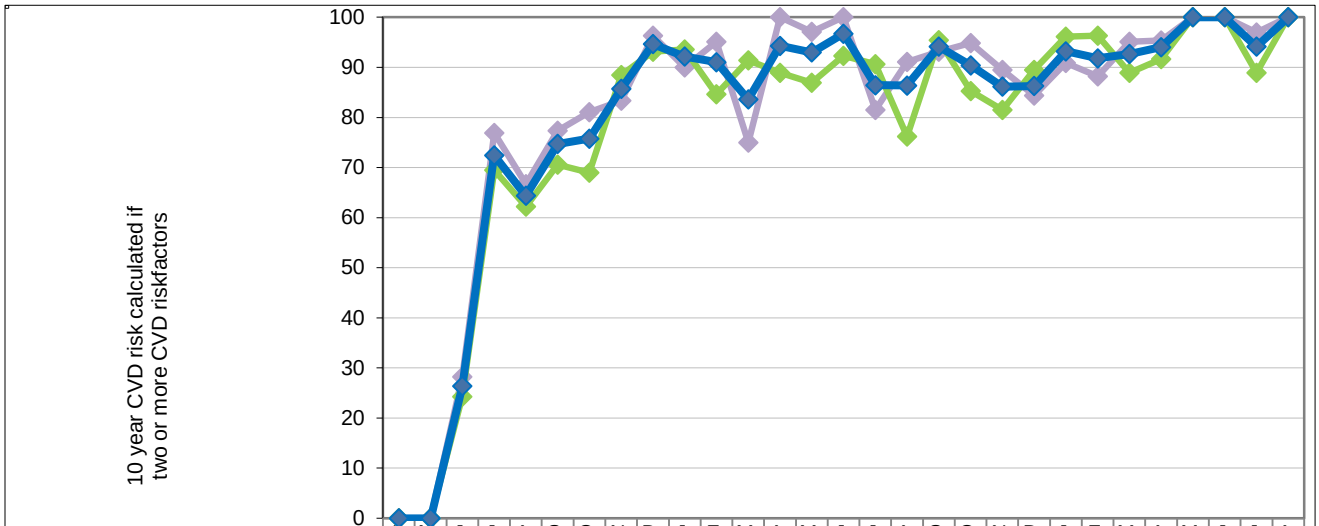
- The routine monitoring data at the beginning of our intervention also showed higher rates of nutrition and physical activity counselling in men, compared to women (Figure 85). With intensive support and implementation of "every patient every time" principle by providers, the documentation of nutrition and physical activity counselling also shows above 90% compliance and no gender disparities.

Figure 85: Georgia: Documentation of nutrition and physical activity counseling disaggregated by sex among patients with one or more CVD risk-factors or diabetes, CAD, heart failure or stroke in three polyclinics and 13 village practices (April 2012 – Aug 2014)



- <u>Improved assessment of 10 year CVD risk by providers:</u> Sex disaggregated data of routine monitoring results in quarter 2 (Q2), FY14 revealed that the gender-specific gaps might be found even in the practices with more than 90% compliance. For example, in February 2014, calculation of 10 year CVD risk was 88% in female and 96% in male patients. The difference could be explained with providers' perception that the cardiovascular disease is more prevalent in men than in women. Since this perception is currently not confirmed by modern scientific evidence, Georgia ASSIST team initiated gender sensitive interventions to fill the gap in women in this very important screening practice, considered as the best-buy by WHO. As a result of these efforts, the results of Q3 and Q4 of FY14 demonstrated 100% compliance with CVD risk assessment best practices both in men and women (Figure 86).

Figure 86: Georgia: Calculation of 10-year CVD risk in five sites (encompassing three polyclinics and 13 village solo practices), disaggregated by sex (April 2012-August 2014)



	A-12	M-12	J-12	J-12	A-12	S-12	O-12	N-12	D-12	J-13	F-13	M-13	A-13	M-13	J-13	J-13	A-13	S-13	O-13	N-13	D-13	J-14	F-14	M-14	A-14	M-14	J-14	J-14	A-14
Denominator among females	40	49	39	39	42	53	37	30	27	20	41	32	34	34	35	27	45	29	39	38	32	33	34	41	43	28	48	33	28
% among females	0	0	28	77	67	77	81	83	96	90	95	75	100	97	100	81	91	93	95	89	84	91	88	95	95	100	100	97	100
Denominator among males	25	34	33	59	45	34	29	26	29	31	26	35	36	23	26	32	21	22	34	27	19	26	27	27	24	24	15	18	20
% among males	0	0	24	69	62	71	69	88	93	94	85	91	89	87	92	91	76	95	85	81	89	96	96	89	92	100	100	89	100
Denominator Total	65	83	72	98	87	87	66	56	56	51	67	67	70	57	61	59	66	51	73	65	51	59	61	68	67	52	63	51	48
10 year risk	0	0	26	72	64	75	76	86	95	92	91	84	94	93	97	86	86	94	90	86	86	93	92	93	94	100	100	94	100
# of Sites Reporting	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5

- **USAID ASSIST continues the practice of HCI in Georgia to validate at least 25% of indicators reported by QI teams against primary data sources.** During the field visits, the project's QI coaches randomly select medical charts during the routine monitoring and review them together with facility QI teams.
- **In order to properly ascribe the impact of the project interventions to the results, in addition to routine monitoring of medical charts, ASSIST Georgia assessed the effectiveness of QI interventions in participant and comparison sites through effectiveness and cost effectiveness assessment (ECEA) before and after 18 month of project interventions.** The assessment was comprised of: medical chart review, patient, provider and manager interviews, and review of key inventory inputs of intervention and control ambulatory care facilities and hospitals. The impact of interventions has been validated via: 1) comparing routine monitoring results to ECEA results (almost all routine monitoring indicators were collected during the study period); 2) comparing results of ECEA between intervention and control facilities before and after the project interventions and calculating the "attributable difference" to QI; 3) triangulating results from different sources of ECEA, such as medical chart audit, provider interviews, and patient interviews.
    - For example, Figure 87 and Table 10 show results of cardiovascular disease risk management from different assessments: routine monitoring of randomly selected charts, conducted every months during the intervention period and non-randomized controlled assessment of effectiveness and cost-effectiveness of QI before and after the project interventions in project supported and control (comparison) ambulatory care clinics. The results in Table 10 show dramatic improvement in CVD risk assessment and management attributable to QI interventions in project-supported medical facilities at the endline compared to control facilities. The fact that these assessment results are comparable to the routine assessment results shown in Figure 87 and the results are statistically significant, lends credibility to the validity of the routine monitoring data.

Figure 87: Georgia: Calculation of 10-year risk of CVD event and primary and secondary prevention of CVD with high-impact medication bundle in three polyclinics and 13 village practices (March 2012 – Aug 2014)

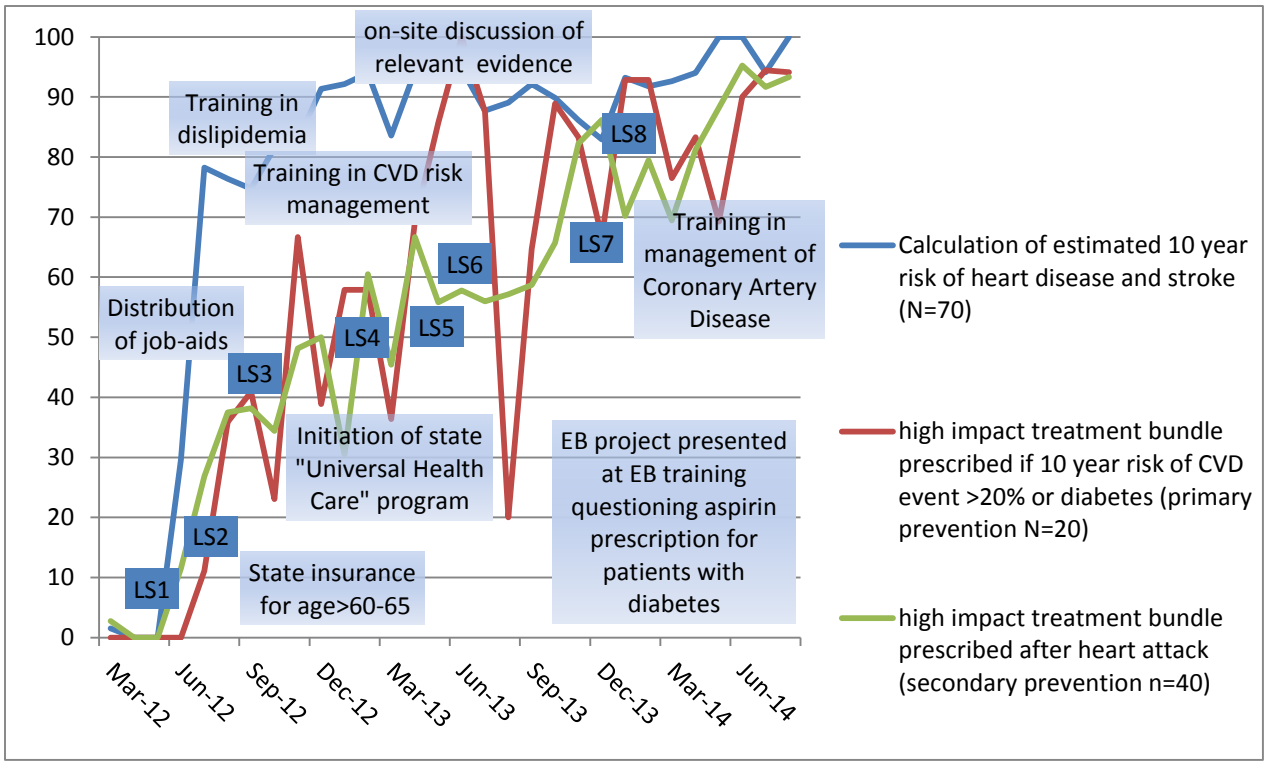


Table 10: Georgia: Results of cost-effectiveness assessment: CVD risk screening and management practices (April 2012 – Nov 2013)

Indicators	Baseline (Apr 2012)	End-line (Nov 2013)	Attributable difference between intervention and control facilities, compared to baseline
% of charts of patients with at least two CVD risk factors in which risk of CVD event in next 10 years calculated	0/48	93.65% (59/63)	Improved by 94% p<0.0001
% of charts of patients with established risk of CVD event in 10 years > 20% or diabetes treated with multi-drug therapy: aspirin, statin, BP-lowering drugs	0/24	93.33 % (14/15)	Improved by 92% p<0.0001
% of patient charts with CAD on secondary prevention (Aspirin, beta-blocker, ACE-I/ARB, Statin)	5.77% (3/52)	91.38% (53/58)	Improved by 73% p<0.0001

Activity 2. Improve access and use of evidence-based medical information and treatments

KEY ACCOMPLISHMENTS

- **With technical, organizational, and financial support from ASSIST, the Georgian American Medical and Public Health Association (GAMPHA) organized the 3rd Annual International Medical Conference** which brought together medical professionals from all over Georgia, representatives of various international organizations, non-governmental and private sector stakeholders supporting health sector reform programs in Georgia, and about 10 Georgian

medical diaspora representatives practicing in the United States, Europe, Germany, Holland, and other countries (total 5152 provider-hours of CME conducted).

- **Dr. Tamar Chitashvili, COP ASSIST Georgia, presented project interventions and results at the international conference on Caucasus Healthcare Infrastructure and Pharma Investment Summit** (Tbilisi, June 19, 2014). Health care policy makers, European professional associations, pharmaceutical regulators, international financial institutions, and private sector representatives participated in the various panel sessions, covering different topics in health care sector. The presentation of the COP was focused on improving quality as a part and essential tool for results-based budgeting and sustainable public health financing.
- **The COP and quality improvement consultants of ASSIST Georgia participated in the 4th International Congress of the Georgian Respiratory Association** (Batumi, Georgia, June 19, 2014). At the Congress, speakers from the association, ASSIST, Georgian medical diaspora in the US and Europe, and clinical experts from various countries participated (approximately 1000 doctors representing different medical specialties in Georgia) and provided current recommendations for diagnosis and management of different respiratory conditions. The Congress was widely featured by media: click here to view the video
- **Evidence-based Medical Portal and project Facebook page.** The project continued uploading evidence-based resources on the web-page: health quality website. To increase awareness about the project, concept, and methods of improving health care quality and access to evidence-based medical information, the project sponsored the Facebook page. During reporting period, Georgia ASSIST team posted 220 updates on evidence-based management of different clinical conditions. The updates contain links to the original resources on best clinical and QI practices and translated summary evidence updates in Georgian. Currently the Facebook page has 1,657 likes, mostly from medical personnel, professional medical associations, and health care facilities.

SUSTAINABILITY AND INSTITUTIONALIZATION

- **To improve sustained access to high quality, cost-effective treatment services and medications in Georgia, the project team developed draft State Program on Outpatient Medications for Chronic Patients.** At the request of the MOLHSA and National Center for Disease Control and Public Health (NCDC), in consultation with MOLHSA representatives and the Georgia Family Medicine Association, the ASSIST team developed the medication package and the budget for the program (based on the prevalence, utilization patterns, and retail price of the medications in Georgia pharmaceutical market). The program considers coverage of high-impact, cost-effective medications to prevent and treat priority chronic diseases (hypertension, ischemic heart disease, diabetes, cerebro-vascular disease, asthma, and COPD) (Q4).The project also provided the rationale for choosing each medication and corresponding evidence on their effectiveness/cost-effectiveness to prevent and manage above-mentioned priority NCDs. The ASSIST team hopes that the program greatly contributes to sustained access to essential NCD medications and consequently to enhanced adherence to evidence-based treatment of NCDs in Georgia.
- **Organized roundtable discussion on NCDs:** To support the Georgian Government in its effort to sustain, institutionalize, and scale up quality improvement interventions in NCD prevention and treatment services countrywide, on September 26, 2014, ASSIST supported the Embassy of Georgia in the United States to organize and conduct a Roundtable Discussion on “Future Collaborations for Improving NCD Care and Outcomes in Georgia” in Bethesda, Maryland. In attendance were the Minister of Labor, Health and Social Affairs of Georgia, the Director of Georgia’s National CDC, USAID representatives, and participants from the US Centers for Disease Control and Preventoin, National Institutes of Health, World Bank, Rostropovich-Vishnevskaya Foundation, American Psychiatric Association, and Development Finance International. The meeting participants highlighted the importance of sustaining, institutionalizing, and scaling up successful QI interventions achieved under the USAID ASSIST Project in Georgia and agreed to continue dialogue to guide future integrated actions on prevention and control of NCDs.
- With close involvement of relevant professional associations, the ASSIST team translated and adapted national protocols in the project’s clinical focus areas. The protocols are intended to

standardize diagnostic/treatment interventions at inpatient and outpatient levels of care, provide standard audit criteria to evaluate quality of medical services, and make evidence-based clinical decisions at each level of health service delivery system. During FY14, the following nine protocols were adopted by ministerial decrees:

- Management of ST Elevation Myocardial Infarction (STEMI) (approved by #01-58/o Decree of Minister of MoLHSA on March 11, 2014)
- Management of Non-ST Elevation Myocardial Infarction (NSTEMI) and Unstable Angina (approved by #01-66/o Decree of Minister of MoLHSA on March 20, 2014)
- Management of Hypercholesterolemia/Dislipidemia (approved by #01-158/o Decree of Minister of MoLHSA on June 28, 2014)
- Cardiovascular Disease Risk Detection and Modification (approved by #01-53/o Decree of Minister of MoLHSA on February 28, 2014)
- Management of Asthma at Ambulatory Level (approved by #01-160/o Decree of Minister of MoLHSA on June 26, 2014)
- Management of Asthma Exacerbation (approved by #01-53/o Decree of Minister of MoLHSA on February 28, 2014)
- Management of Chronic Obstructive Pulmonary Disease at Ambulatory Level (approved by #01-159/o Decree of Minister of MoLHSA on June 26, 2014)
- Management of Chronic Obstructive Pulmonary Disease Exacerbation (approved by #01-53/o Decree of Minister of MoLHSA on February 28, 2014)
- Spirometry in Clinical Practice (approved by #01-53/o Decree of Minister of MoLHSA on February 28, 2014)

To improve access to quality improvement implementation tools countrywide, the project incorporated all QI tools (including but not limited to job aids, chart standardization tools, change packages, routine monitoring indicators, provider job aids, and decision support tools) tested and successfully implemented in project-supported medical facilities of Imereti Region in these respective national protocols. As the result, these tools are now institutionalized at national level as recommended best practices through the above-mentioned ministerial decrees and are available at the MOLHSA website.

UKRAINE

BACKGROUND

Alcohol and tobacco use in Ukraine are among the highest in the world and place heavy users at risk of cardiovascular disease, cancers, and other non-communicable diseases (NCDs) and premature death. Among women of reproductive age (15-49 years), alcohol and tobacco use impose a dual risk: to the health of the woman and to her baby. To assist Ukrainian partners in reducing alcohol and tobacco use during pregnancy, ASSIST is implementing in Ukraine an evidence-based NCD intervention as Brief Physician Interventions (BPI). Together with the MOH of Ukraine, two oblasts Poltava and Luhansk were initially identified for BPI implementation and agreed upon with local health authorities. Due to the political changes in Luhansk Oblast, the decision was made to focus the activity only in Poltava Oblast by adding more health facilities.

The experience of successfully implemented BPI in demonstrating reduction in alcohol and tobacco use by pregnant women, will be described in the format of a clinical-organizational protocol (guideline) that will include a description of BPI, process of BPI delivery (e.g., explaining for whom the intervention is appropriate, when, where, etc.), recording and reporting tools, job aids, and referral mechanisms to specialty care. By the end of the activity, this protocol will be presented to local and national health authorities for incorporation into the routine practice of health care providers in the country. In addition, the project will work with medical education institutions to incorporate the BPI training curricula into post-graduate medical education.

This work was initiated under HCI with funding from the Europe and Eurasia Bureau of USAID. Funding for the activity was also provided by the E&E Bureau through ASSIST. ASSIST support for

the intervention began in July 2014.

Scale of USAID ASSIST's Work in Ukraine

MOH of Ukraine, Poltava Oblast Health Care Department, Ukrainian Association of Narcologists, National Medical Academy for Postgraduate Education

10 Women's Consultation Clinics

5 cities in Poltava Oblast (Poltava, Kremenchuk, Komsomolsk, Mirhorod, Lubny)

11 Quality Improvement Teams

2,500 females of reproductive age (15-45 years old) of total 890,000 of women population in Poltava oblast

PROGRAM OVERVIEW

Activities	What are we trying to accomplish?	At what scale?
1. Training of trainers on an evidence-based BPI for tobacco and alcohol cessation	• To secure at minimum 80% of tobacco- and alcohol-free pregnancies in selected facilities by December 2014 • To secure at minimum 80% coverage with BPI and family planning counseling of reproductive age women and girls (15-17 years old).	**Oblast:** Poltava **Cities in Poltava Oblast:** 5 (Poltava, Kremenchuk, Komsomolsk, Mirhorod, Lubny) **Facilities:** Women's consultations, family planning offices, ambulatory polyclinic (total number 10) **Health care providers:** (total number 90) **Target population:** pregnant women (primary), teenage girls, women of reproductive age (2,500 of total 890,000 of women population in Poltava Oblast) **QI teams:** 11 at national level and local level
2. Training of health care providers on the use of BPI and family planning counseling		
3. Two learning sessions for participating providers to facilitate shared learning from the implementation of BPI		
4. Development of clinical-organizational protocol (guideline) for BPI implementation nationwide		
5. Development of a training curricula for BPI and facilitation of incorporating the curricula into post-graduate medical education in one or two medical education institutions in Ukraine		

These activities received co-funding through the USAID Health Care Improvement Project through August 2014.

Activity 1. Training of trainers on an evidence-based BPI for tobacco and alcohol quitting

KEY ACCOMPLISHMENTS

- **Training of trainers (ToT) conducted in Potava (July 1 – 3, 2014)** with participation of US trainers/experts R. Windsor and T. Balachova.
  - 12 trainers from national and local levels were identified to participate in theoretical and practical training sessions.
  - Training materials were developed according to current US and international evidence-based practices in preventing alcohol and tobacco consumption among pregnant and reproductive aged women.
  - Evaluation forms were distributed among participants before and after the training. The evaluation results are part of the US experts' travel reports.
  - All developed training materials were used for adaptation to current Ukraine practice and submitted to the curricular of postgraduate training for primary health care specialists working in reproductive health.
  - Trained doctors provided training on BPI for the QI teams in pilot polyclinics before implementation phase, which started in September 2014.

Activity 2. Training of health care providers on the use of BPI and family planning counseling

KEY ACCOMPLISHMENTS

- **Training for medical providers on the BPI technology on August 28-29, 2014.** The overall number of trained doctors/health care providers from QI teams was 80. The following adapted training materials were published and distributed among trainees: 1) Technology of BPI to decrease tobacco and alcohol consumption by women of reproductive age and pregnant women - methodological recommendations for doctors; 2) Workbook for pregnant women to quit smoking and drinking alcohol; 3) Workbook for women of reproductive age to quit smoking and drinking alcohol; 4) Standard dose of alcohol – short pocket card; 5) BPI – 5"A" algorithm for smoking and alcohol quitting – short pocket card; 6) Audit test (short version) – pocket card.

Activity 3. Two learning sessions for participating providers to facilitate shared learning from the implementation of BPI

- Learning sessions were postponed and will be provided after the implementation phase starts.

Activity 4. Development of clinical-organizational protocol (guideline) for BPI implementation nationwide

KEY ACCOMPLISHMENTS

- The national working group to prepare the clinical protocol for BPI collected and submitted comments to the Ukrainian version of guidelines according to the official procedure (existing MOH order for guidelines and protocol submission).
- Drawing on evidence-based guidelines, the Draft Clinical Protocol for using BPI interventions among specialists at the primary health care level to motivate pregnant women and women of reproductive health to decrease and quit using tobacco and alcohol were developed and sent for review.

Activity 5. Development of a training curricula for BPI and facilitation of incorporating the curricula into post-graduate medical education in one or two medical education institutions in Ukraine

KEY ACCOMPLISHMENTS

- **Drafted program for training curriculum** based on training program provided by US training experts on July 1-2, 2014.

- **Submitted training curricular dossier with all necessary supporting documents to Scientific Council of Postgraduate Medical Academy for approval** (August 2014). Academic approval was obtained from at the Methodological Council of National Medical Academy of Postgraduate Education (NMAPE) on September 16, and at the Scientific Council of NMAPE on September 17, 2014.

LATIN AMERICA

HAITI

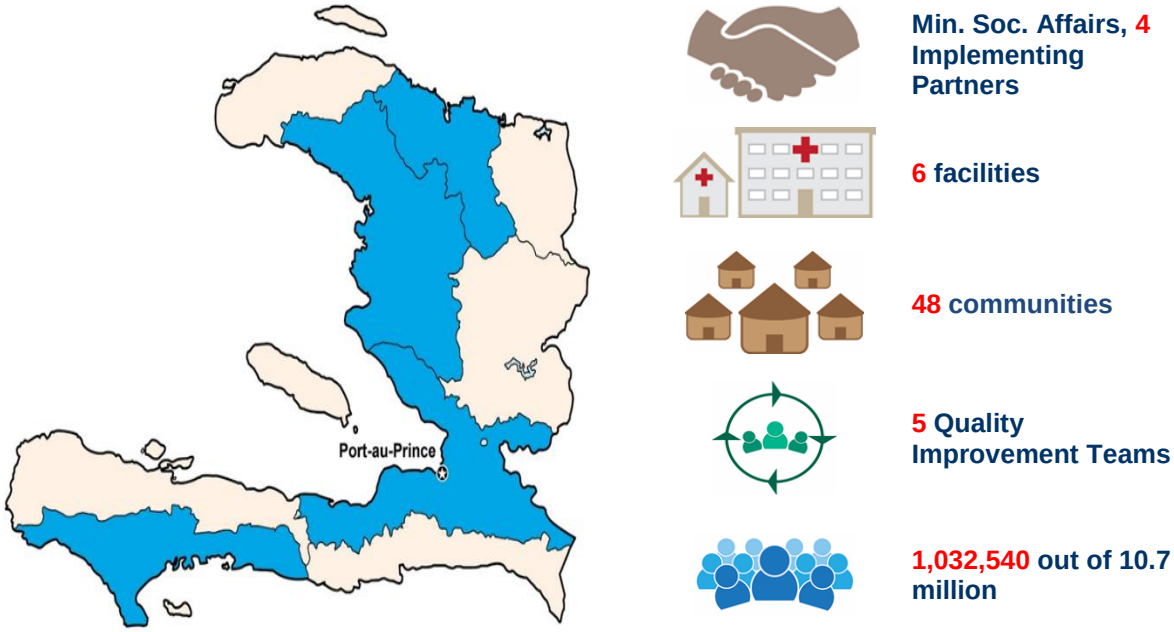
BACKGROUND

The HCI Project was invited in 2011 by USAID Haiti to provide technical assistance to the *Institut du Bien Etre Social and de la Recherche* (IBESR), Ministry of Social Affairs, and USG OVC implementing partners in Haiti to improve the quality of services offered to vulnerable children and families affected by HIV. The project has been focused on building consensus among stakeholders to develop and implement a set of minimum service standards for vulnerable children at the point of service delivery. The guiding principle of the work was to engage stakeholders to reflect on the essential question: "What measurable differences do our programs make in the lives of children and how would we know that our programs are making such a difference?"

Since 2011, HCI has provided technical assistance to IBESR to lead a process of identifying champions from the government, local and international organizations, and other stakeholders to form a 15-member National Task Team to pilot and implement service standards and provide support for quality improvement. The National Guidelines were officially launched by IBESR and the Ministry of Social Affairs on November 20, 2013. Following close-out of HCI assistance in December 2013, ASSIST has continued to support teams included in the piloting of the guidelines (North, West and Artibonite departments) and initiated implementation of the guidelines in North East, South, and Grand Anse departments.

USAID Haiti has requested that ASSIST continue providing technical assistance to IBESR and partners in FY15 for the dissemination of the national guidelines throughout the remaining departments in Haiti and to provide technical support to department-level stakeholders to develop work plans for implementation of the guidelines using an improvement approach.

Scale of USAID ASSIST's Work in Haiti



PROGRAM OVERVIEW

Activities	What are we trying to accomplish?	At what scale?	Improvement Activity	Activity
1. Build capacity of government and NGO partners to implement national service standards to improve quality of care for vulnerable children and their families	• Improve the quality of OVC services & care through distribution of national service standards in six departments	Spread implementation of standards within three departments: North, Artibonite, and West. Initiate implementation in three additional departments, selection to be determined in collaboration with IBESR, USAID, and partners. Current implementing sites: - 6 health facilities implementing the care standards on health, psychosocial, income activities and protection; the six sites cover 48 communities - Dissemination of the national guidelines to 68 communities - 5 QI teams working in four geographic departments - 1,032,540 people covered by dissemination and implementation of the national guidelines	x	
	• Develop strategies for identifying and overcoming critical barriers in the scale up and sustaining of effective high-impact interventions provided to vulnerable children and their families in Haiti.	One site in each of the three departments that participated in the piloting of the standards		

Activity 1. Build capacity of government and NGO partners to implement national service standards to improve quality of care for vulnerable children and their families

KEY ACCOMPLISHMENTS

- **Signed Memorandum of Understanding (MoU) with IBESR** (February 2014). URC signed a MoU with IBESR based on the technical support provided by URC through the USAID ASSIST Project. IBESR awarded a certificate of recognition to URC for its contribution to the child protection sector in Haiti.
- ASSIST contributed to the review of the terms of reference of the Child Protection Group formed by IBESR in collaboration with all partners that signed the MoU (Q2).
- **Held meetings with stakeholders and partners to discuss implementation of national service standards and to choose sites** (Q2). It was decided that the following partners would collaborate in the implementation of the national guidelines: IBESR, USAID, Pathfinder, ASSIST, Caris Foundation, Handicap International, CRS, Partners in Health (PIH), World Vision, and Health Through Walls (HTW). Grand'Anse and South were selected as the geographic departments for piloting. The sites chosen for implementation of the guidelines are located in Verretes, Titanyen, Montrouis, Cayes, Jeremie, Delmas and the North Department.
- **Conducted field visit in Verrettes** (March 2014)**.** A field visit was conducted in Verrettes to meet the program team of the Hospital Durmasais Estime to discuss terms for implementing the national guidelines and to schedule a training session. Five people including the program director, nurse in charge of nutrition, HIV/AIDS coordinator, social worker, and the focal point for

vulnerable children for PIH attended this meeting in Verettes conducted by the ASSIST Resident Advisor.

- **Conducted first training session on QI in Verettes** for the three sites in the two geographic departments (March 2014)**.** Twelve people, including focal points of Health through Walls, World Vision, and PIH, IBESR representatives, and the local team of Verretes Hospital were trained on the process for implementing the guidelines.
  - The training included discussions on quality dimensions, quality improvement methodology, team work, model for improvement, measurement (i.e., developing and tracking indicators), QI tools, as well as the content of the national guidelines and strategies for its implementation.
  - After conducting the first part of the training, the staff from the Hospital Dumarsais Estime became very motivated to do the improvement work and to disseminate the national guidelines in Verrettes.
- **Conducted second learning session (April 2014):** Conducted coaching session for the four sites in the four communes implementing the national OVC standards. Thirty participants attended, including three site managers, six nurses, five psychologists, eight social workers, two data clerks, four IBESR representatives, and two doctors in charge of the HIV/AIDS program.
- **Conducted a session on dissemination of care standards in South Department for 25 sites located in 16 communes** (June 2014). Thirty-seven participants, including local media, attended this training session of two days. Mechanisms to implement and disseminate the standards were developed during this training session.
- **Conducted coaching sessions** (June 2014). Conducted coaching sessions in the Lumiere health center in les Cayes, in Hospital Durmasais Estime in Artibonite, and in Clinic Dugue in Morne Rouge. Quality improvement teams were set up and began to meet on a weekly basis to discuss quality improvement implementation. As a result, some needed improvements were observed, for example:
  - The Hospital Durmasais Estime in Artibonite observed that HIV testing of children is very low. Their improvement aim was to increase the number of tested children in three months. Similarly, the Clinic Dugue located in Morne Rouge also wanted to increase the percentage of children of parents with HIV who are tested for HIV (see Table 11 for HIV testing rates among children April-June 2014)

Table 11: Haiti: Low HIV testing of children of HIV-positive parents at Clinique Dugue, South Department

Month	Number of parents enrolled in HIV care	Number of children of parents in care who are tested for HIV
April 2014	7	0
May 2014	11	1
June 2014	10	0

- **Set up additional quality improvement team in South Department** (June-July 2014): A quality improvement team composed of 15 members from different communities and child protection stakeholders was set up in les Cayes (South Department) to work on the dissemination of standards and on improvement activities implemented in two sites (Pwoje Espwa and Health Facilities FINCA).
- **Dissemination of the national guidelines:** Conducted five workshops on the dissemination of the national guidelines for 163 sites representatives from 48 communes in the six geographic departments of Haiti (July – August 2014).
- **Conducted coaching sessions**:

- Coaches training was provided for 22 protection agents, five regional coordinators of IBESR, and two representatives of the General Direction of IBESR (August 2014).
- Two parallel sessions were organized for 119 field agents of three geographic departments (September 2014).
- Conducted coaching session in all five health facilities (August – September 2014). In addition, another training session was held in Kaliko Beach for 40 sites, the local QI team, and five representatives of IBESR regional offices.
- A parallel QI session was held for the departmental QI team of South Department (September 2014). As result an action plan was designed for improvement activities over the next 12 months.

RESULTS

- **Self-assessments conducted by partners**
  - PIH, Health Through Walls, and World Vision each conducted a self-assessment of their sites in Verrettes, Delmas, and Titanyen (March 2014). The self-assessments helped PIH and HTW understand the standards they have to implement to improve the quality of services provided for vulnerable children affected by HIV. Figure 88 shows the percentage of services provided and gaps, as reported by PIH, Health Through Walls, and World Vision.
  - Partners In Health, Health Through Wall, and World Vision conducted self-assessments of two sites in North and North East Departments about service standards implementation (June 2014). Clinic Dugue in Morne Rouge (Cap Haitian) was assessed on health and psychosocial standards, while the Medico-Social Centre of Ouanaminthe (CMSO) was assessed on health sector standards. The percentage of standards being met ranged from 37%-46% (Figure 89).

Figure 88: Haiti: Self-assessment of services areas implemented by partners (March 2014)

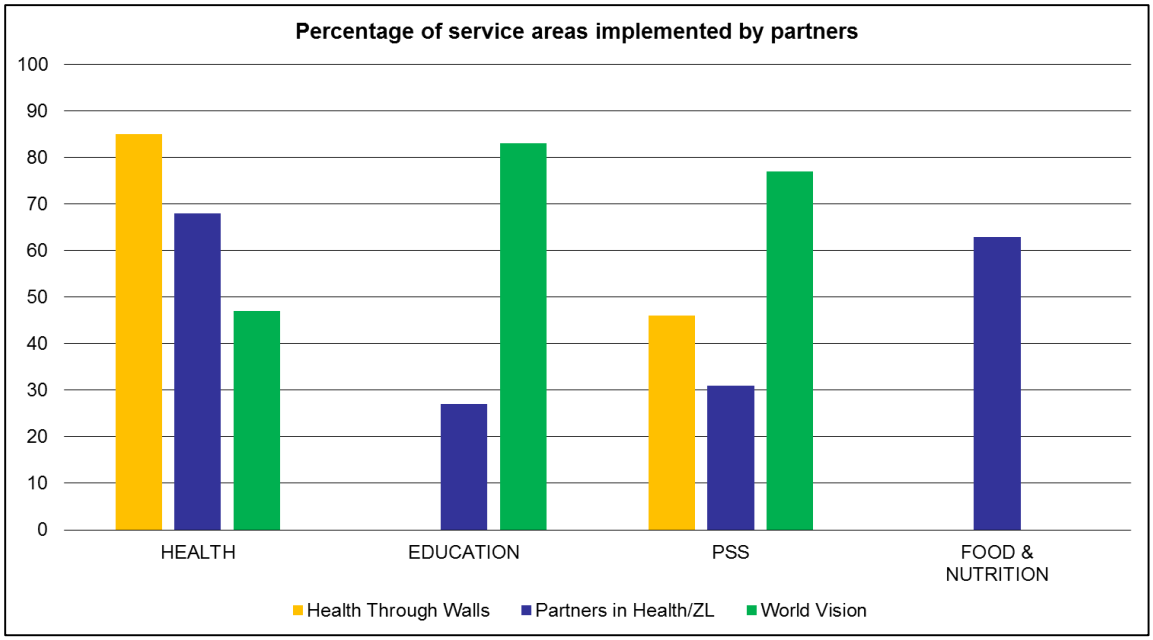
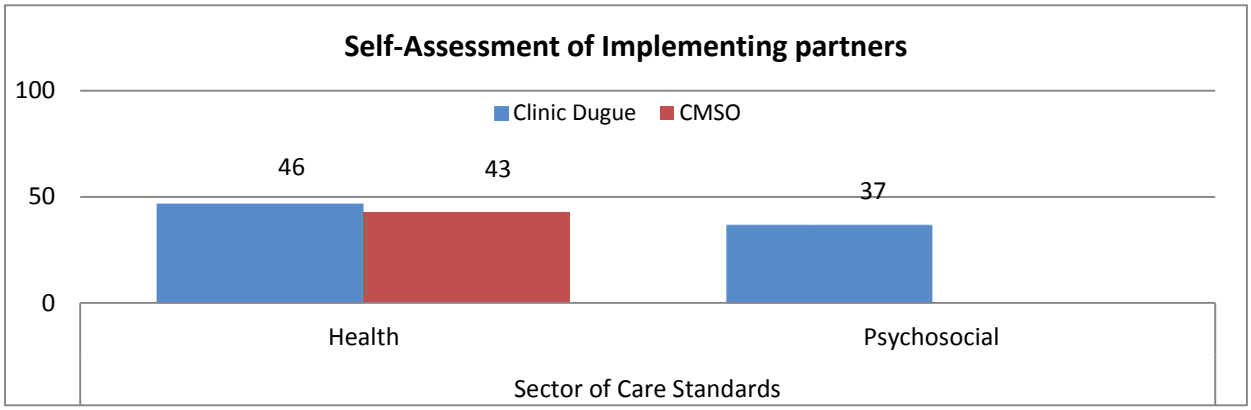
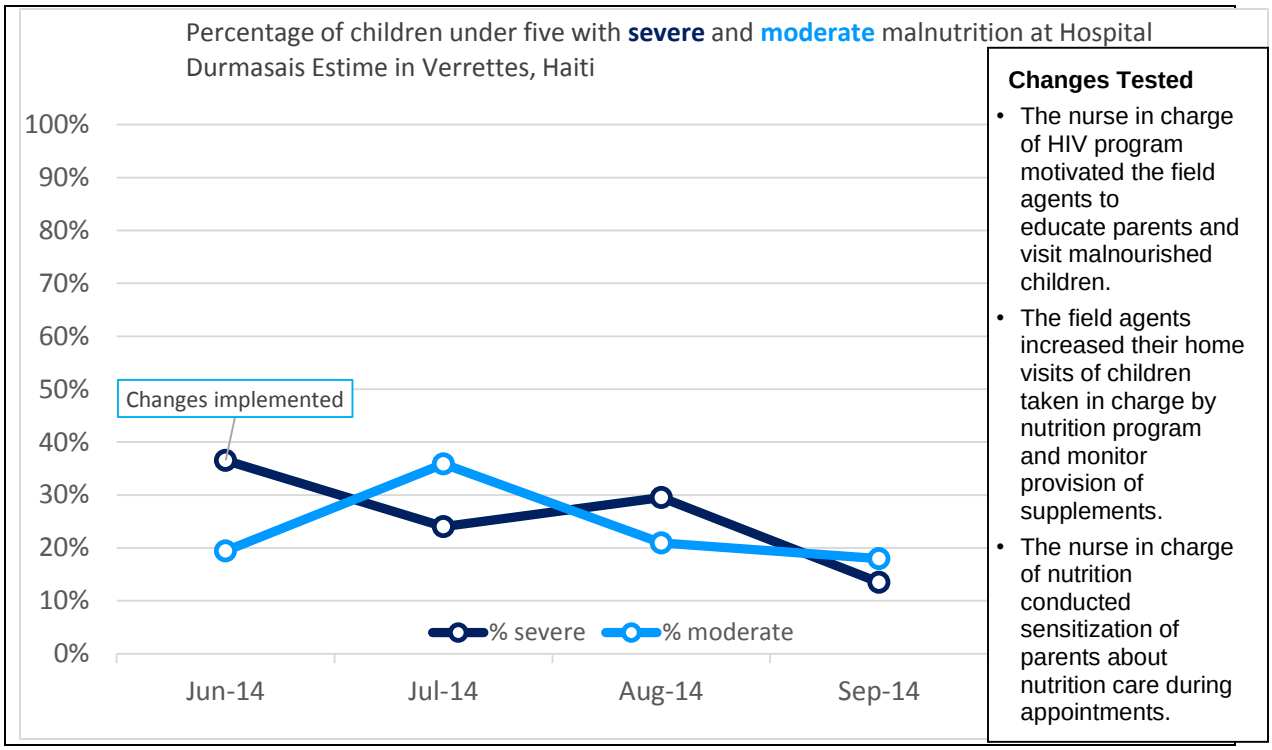


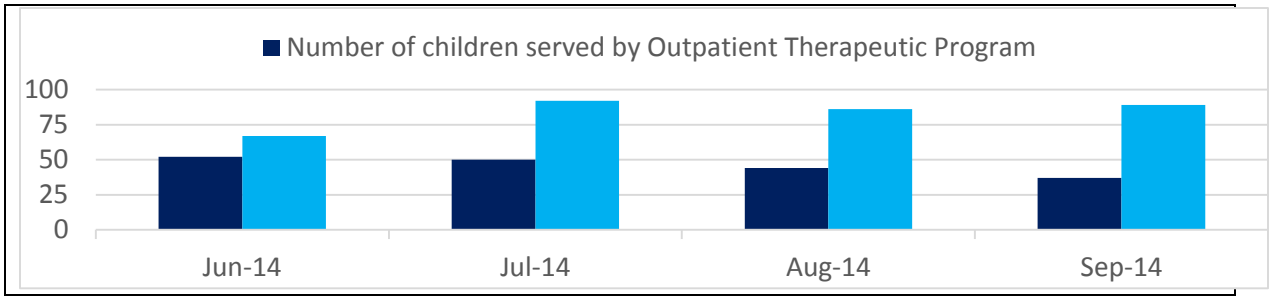
Figure 89: Haiti: Self-assessment of service areas implemented by partners on health and psychosocial guidelines (June 2014)



- **Decreased the proportion of children with severe acute malnutrition**. Rates of children under five years with severe acute malnutrition decreased from 37% to 14% between June and September 2014 at the Hospital Durmasais Estime, Verrettes. Rates for those with moderate acute malnutrition were more variable (Figure 90).

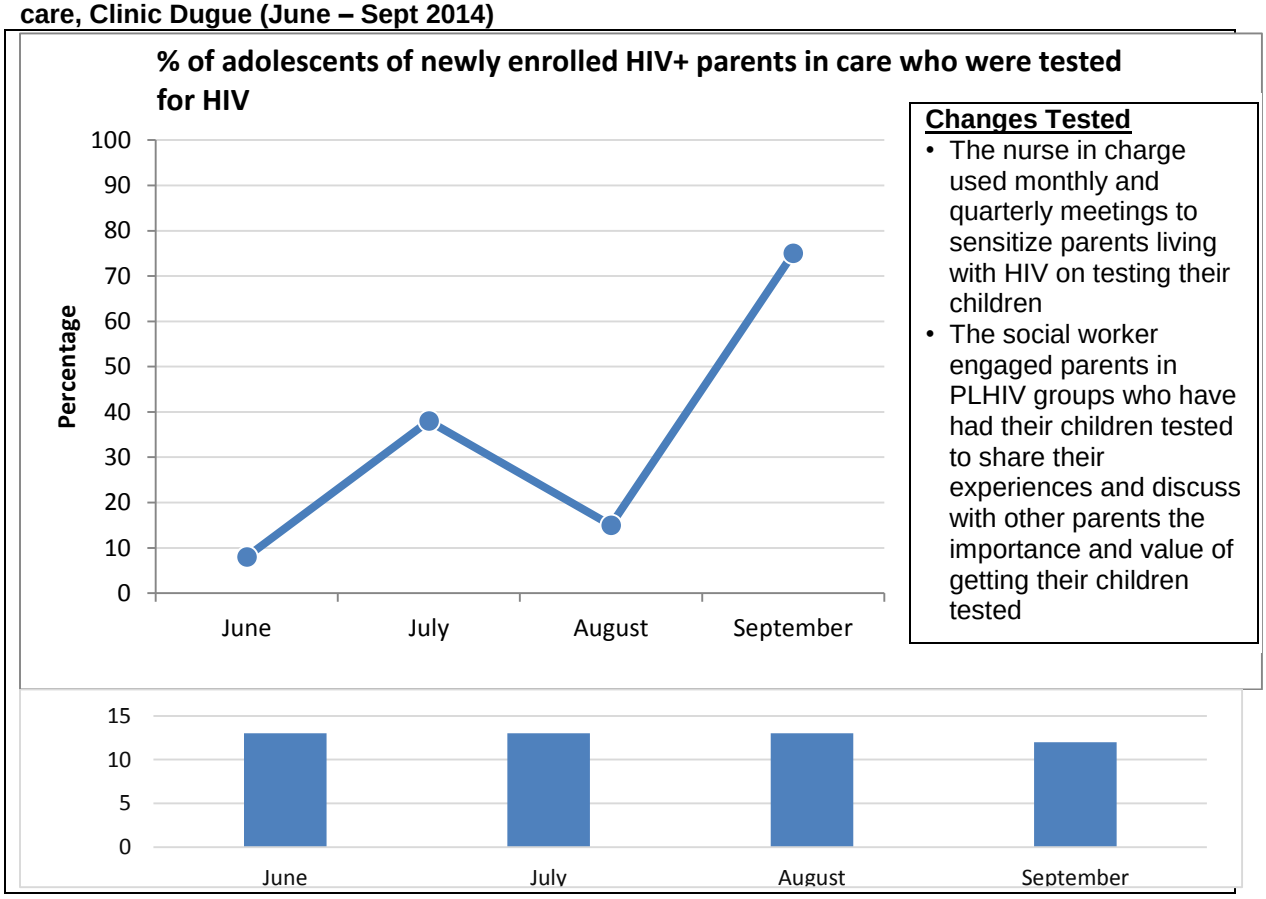
Figure 90: Haiti: Percentage of children under five years with acute and severe malnutrition at Hospital Durmasais Estime, Verrettes, Haiti (June – Sept 2014)





- **Improved the level of HIV testing of adolescents (12 to 18 years old) of HIV-positive parents**. In Clinic Dugue, the percentage of adolescents of HIV-positive parents tested for HIV increased from 8% in June 2014 to 75% in September 2014 (Figure 91).

Figure 91: Haiti: Percentage of adolescents (12 to 18 years old) of HIV parents tested for HIV care, Clinic Dugue (June – Sept 2014)



SUSTAINABILITY AND INSTITUTIONALIZATION

Three new QI teams were formed and two others were reinforced at the community level. These were empowered to make changes in care and support mechanisms in order to create ownership, which is a primary driver of sustainable results.

USAID ASSIST supported IBESR in the institutionalization process such that improvement becomes an integral part of the way social services are delivered in Haiti. USAID ASSIST worked with and through departments and communities so that QI teams can become capable of conducting improvement on an ongoing basis. At the national level, regular contact has been made with IBESR leadership to support QI activities and review and share progress with the Ministry and other stakeholders. At the departmental level, each IBESR coordinator has designed an action plan to

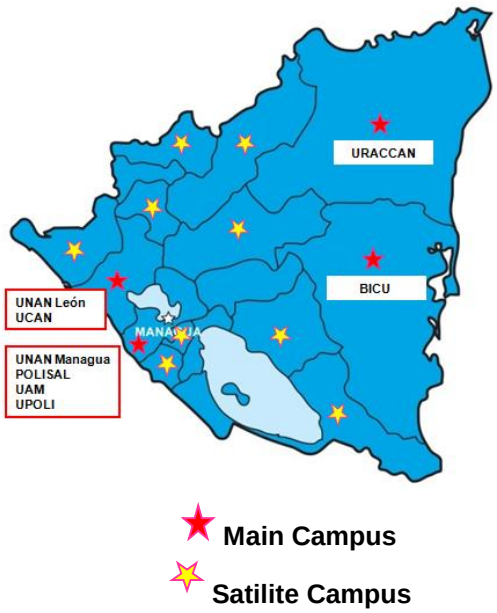
implement improvement in services for vulnerable children with the support of the departmental QI team.

NICARAGUA

BACKGROUND

Since January 2014, the USAID ASSIST Project is supporting the institutionalization of improvement methods and pre-service training in HIV services in the medical and nursing schools of eight public and private universities in Nicaragua. The project is assisting in developing the skills of nursing and medical faculty to apply a teaching package for quality care. It is continuing the work with universities in Nicaragua begun under HCI in October 2012.

Scale of USAID ASSIST's Work in Nicaragua



8 universities of 13 existing in the country (62%)

8 Quality Improvement Teams

5,157 students out of 6,192 (83%)

PROGRAM OVERVIEW

Activities	What are we trying to accomplish?	At what scale?	Improvement Activity	Activity
1. Strengthen the teaching of the continuous quality improvement (CQI) process and the use of the methodological designs included in the Teaching Package in 8 universities	• Promote CQI in teaching by identifying gaps in teaching and learning through HIV KAP surveys among medical students • Increase capabilities among universities' teachers in the use of assessment methodologies for medical and nursing students	8/13 universities: UNAN Managua, UNAN Leon, BICU, POLISAL, UPOLI, URACCAN, UCAN and UAM. 8 QI teams Students:5,157 Teachers: 50	x	
2. Strengthen participation from associations of technical and professional workers in health services quality improvement in	• Involve public medical associations in the management of information on HIV • Transfer knowledge to medical associations of: MOH standards and protocols; the Teaching Package for	Managua, with medical associations and in the public health arena		x

Nicaragua	skill development of HIV prevention and care; as well as best practices for quality improvement			

Activity 1. Strengthen the teaching of the continuous quality improvement (CQI) process and the use of the methodological designs included in the Teaching Package in 8 universities

KEY ACCOMPLISHMENTS

- **Implemented knowledge, attitudes, and practices (KAP) surveys at Bluefields Indian and Caribbean University (BICU), Politécnica de Nicaragua (UPOLI) and Universidad Nacional Autónoma de Nicaragua (UNAN León)** to improve HIV knowledge, attitudes, and practices among medical and nursing senior year students (Q1-2). Surveys were conducted at BICU among medical students previously trained in HIV combination prevention during workshops. Knowledge among these students was better compared with their counterparts in other universities. However, there was still a gap in knowledge of care for people with HIV.
- **Surveys were conducted at UPOLI and UNAN Leon universities among senior year nursing students.** Results were very similar in both universities. UPOLI students had not yet been trained in HIV since they recently started their academic year. UNAN Leon students previously received training on this topic but knowledge gaps persisted, particularly on care for people with HIV (Table 12).
    - These surveys were useful to raise awareness among university authorities on the need to make adjustments to study programs and micro programming, achieving inclusion of the teaching package's HIV module topics and teaching methodologies into the various classes of each academic year for nursing and medicine, as well as adjusting the number of hours allocated to each.

Table 12: **Nicaragua: Average percentage of correct responses in HIV KAP surveys of medical and nursing students (January 2014)**

Topic	Medicine BICU (n=12)	Nursing UPOLI (n=38)	Nursing UNAN León (n=28)
General HIV knowledge	81	67	71
Counseling principles (attitude)	100	46	73
Mother-to-child transmission of HIV	95	69	75
Risk factors for HIV	94	82	91
Transmission ways	94	88	90
Counseling principles (knowledge)	89	50	69
Human rights, stigma, and discrimination	84	76	79
Antiretroviral therapy	82	58	71
Care for people with HIV (knowledge)	58	43	44
Care for people with HIV (attitude)	53	51	48

Source: *HIV KAP surveys conducted among senior year medical and nursing students.*

- **Gaps in knowledge and attitudes were identified and analysed with teachers and university authorities, with the following gaps found** (Q2):
    - Some teachers have still not been trained on the teaching package´s methodological designs and therefore have not yet developed capabilities to implement them.
    - Some teachers work under contracts per hour and do not feel part of the university, thus dedicating less time to teaching and showing little interest, motivation, and commitment to use the methodologies proposed in the teaching package.

- The HIV topics are allocated little time within the medical and nursing students study programs.

- After analyzing the causes of these gaps, the teachers and authorities proceeded to plan interventions to lead to changes in the teaching process including: reviewing contents and the number of hours in the study programs; focused training for the students; and additional training for the teachers on assessment methodologies and the teaching package.

- **Completed analysis of HIV KAP surveys in POLISAL and URACCAN** (Q4). At POLISAL there were 107 surveys completed among fourth and fifth year nursing students. At URACCAN there were 25 surveys completed among fourth, fifth, sixth, and seventh year medicine students. Analyzed and discussed HIV KAP survey results with authorities and teachers from both universities, emphasizing the main knowledge and attitude gaps among medical and nursing students from different years.
  - At POLISAL, general knowledge regarding the HIV topic was at 74% and 79% for fourth and fifth year students, respectively. The greatest gaps in knowledge were in care for people with HIV, counseling principles, ART, and human rights (stigma and discrimination) (Table 13).
  - Sixteen percent (16%) of fourth year students and 24% of fifth year students erroneously said that a healthy diet reduces the risk of acquiring HIV. On the other hand, students know HIV risk factors and transmission ways very well (90-94%). A small percentage (3% fourth year and 8% fifth year students) mentioned incorrect modes of transmission such as through mosquito bites, bathing with the same water, and sharing cutlery.
  - Students also identified possible moments of HIV mother-to-child transmission. The pregnancy period was the least identified moment. While they understood that ART helps to prolong the lives of people with HIV, they did not clearly identify that it decreases the risk of transmission. Two percent of fourth year students and 7% of fifth year students expressed that ART cures HIV.
  - Students also expressed statements that indicate there are still myths and manifestations of stigma and discrimination. Some of the most interesting ones are for example: they consider that people with HIV became infected because they were irresponsible (64% fourth year and 55% fifth year students) and they would feel uncomfortable buying food from someone with HIV (64% fourth year and 55% fifth year students).

Table 13: Nicaragua: Average percentage of correct answers by HIV topic, POLISAL Managua nursing students (July 2014)

Topic	Fourth year n= 58	Fifth year n= 49
All of the questions	69	75
Knowledge questions	74	79
Attitude questions	60	66
HIV risk factors	92	90
Transmission ways	91	94
Principles of counseling (attitude)	58	69
Principles of counseling (knowledge)	60	72
Human rights – stigma and discrimination	70	79
HIV maternal child transmission	73	82
Care for people with HIV (knowledge)	46	53
Care for people with HIV (attitude)	52	55
Antiretroviral Therapy	68	74
Source: SPSS database. HIV KAP study among POLISAL Managua nursing students. July 2014		

- At URACCAN, general knowledge regarding the HIV topic was at 66%, 69%, 74%, and 81% for fourth, fifth, sixth, and seventh year students, respectively. The greatest gaps in knowledge were in care for people with HIV, counseling principles, ART, and human rights (stigma and discrimination) (Table 14).
- Low percentages among students responding to attitude-related HIV questions measuring stigma and discrimination (58%-63%) show that there are still myths and manifestations of stigma and discrimination towards people with HIV – a topic ASSIST will continue to address.
- Designed the Unique System to Record People Trained at Universities (USRPTU), providing records of training sessions for medical and nursing students and teachers from the eight universities in the country receiving USAID's technical assistance between 2012 and 2014.

Table 14: Nicaragua: Average percentage of correct answers by topic, URACCAN Bilwi medical students (August 2014)

Topic	Fourth year n= 12	Fifth year n= 8	Sixth year n= 13	*Seventh* year n= 2
All of the questions	66	69	74	81
Knowledge questions	70	72	79	89
Attitude questions	58	61	65	63
HIV risk factors	88	86	86	100
Transmission ways	87	93	91	100
Principles of counseling (attitude)	38	56	58	75
Principles of counseling (knowledge)	46	50	65	93
Human rights – stigma and discrimination	72	81	76	69
HIV mother-to-child transmission	71	68	82	86
Care for people with HIV (knowledge)	56	58	63	75
Care for people with HIV (attitude)	50	45	58	55
Antiretroviral therapy	67	75	77	70
Source: SPSS database. HIV KAP study among URACCAN Bilwi medicine students. August 2014				

RESULTS

Improvement in Key Indicators

Activity	Indicators	Total (FY14)
To strengthen the teaching of the CQI process and the use of the methodological designs included in the Teaching Package in 8 universities	Number of surveys conducted among medicine students	436 completed out of 363 planned (120%)
	% of universities implementing rapid cycles	4 out of 7 visited (57%)
	Number of teachers per university applying methodological designs	102 out of 120 in the 7 universities visited (85%)
	Number of students per university, trained and assessed using methodological designs	423 of 500 (85%)
	Number of students trained in the new evidence for clinical care for people with HIV.	464 of 500 (93%)
	Number of teachers trained in the new evidence for clinical care for people with HIV	107 of 50 (214%)

Activity 2. Strengthen participation from associations of technical and professional workers in health services quality improvement in Nicaragua

KEY ACCOMPLISHMENTS

- **Met with members of the gynecology and obstetrics, pediatrics, and public health societies to share objectives and action items of the project** (Q2)**.**
- **Held a session to share the teaching package's contents with the members of the Nicaraguan Association of Public Health (ANSAP) from León and Chinandega** (Q3)**.** Thirty-five members participated and received a detailed explanation of the teaching package's HIV module contents, as well as the interactive DVD.
- **In coordination with USAID PrevenSida, ASSIST invited members of the Nicaraguan Association of Public Health to participate in validating the first draft of the clinical guide to comprehensive care for transgender people** (Q4)**.** They provided their input and suggestions to make changes to contents and structure of the guide.

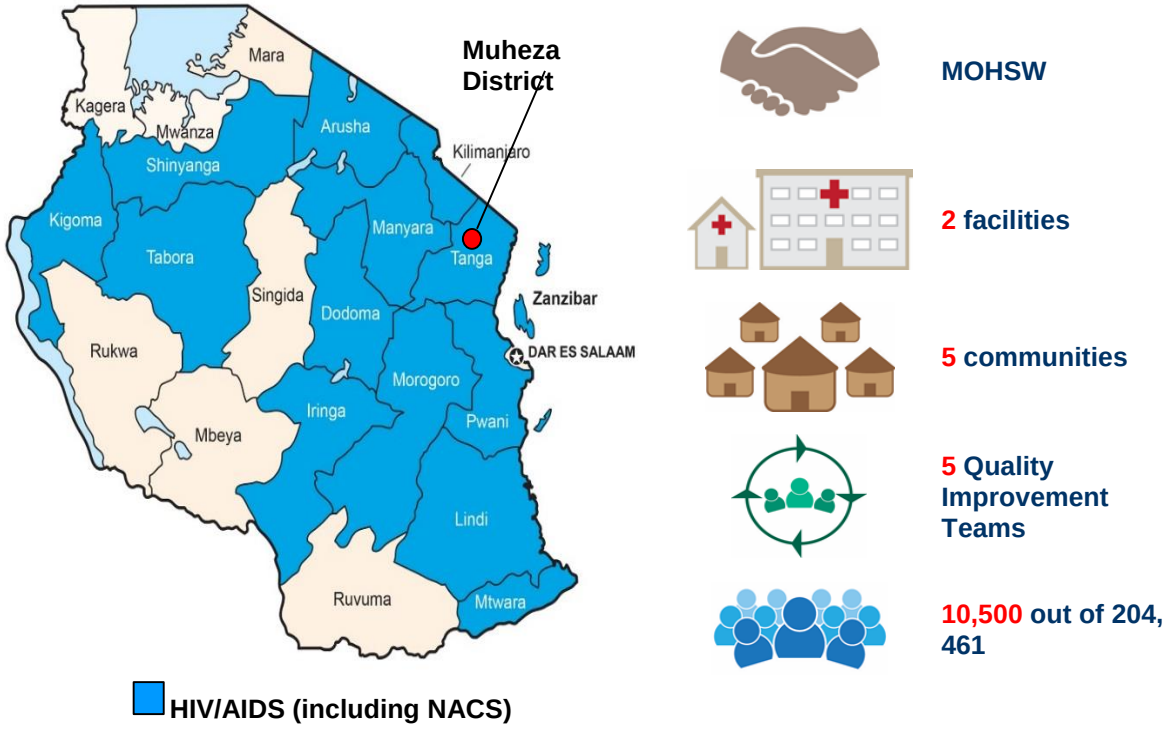
2 Office of HIV/AIDS-Funded Activities

COMMUNITY HEALTH

BACKGROUND

Community-based support can play an important role in improving uptake and retention of people living with HIV and AIDS (PLHIV) by strengthening the linkage between the community and the health facility. Starting in January 2014, ASSIST began the Community Linkages project in Tanzania to engage the informal network of village community groups to extend the outreach system for PLHIV and to help health centers/dispensaries reduce loss to follow-up. This work builds on previous HCI work in the Muheza District of Tanga, Tanzania. In addition, ASSIST is building on a previous HCI improvement activity on home-based care in Tanzania.

Scale of USAID ASSIST's Community Health Improvement Work in Tanzania



PROGRAM OVERVIEW

Activities	What are we trying to accomplish?	At what scale?	Improvement Activity	Activity
1. Community Linkages Demonstration Project	• Optimize linkages between the community and health facility to improve care and treatment services for PLHIV	1/30 region (Tanga) in Tanzania Facilities:1 dispensary/ 60 facilities in Muheza district Coverage: 10,500 target population (PLHIV)/204,461 total population of Muheza district	x	
2. Community Support in Uganda	• Improve identification of PLHIV in the community • Improve self management through health goal setting • Improve clinical status of PLHIV • Improve supervision: Supervisors from facilities give feedback every month	Buikwe District, Uganda (one of 112 districts), involving 1/16 health facilities, 10/475 villages, 20/950 Village Health Teams (VHTs)	x	

Activity 1. Community Linkages Demonstration Project in Tanzania

KEY ACCOMPLISHMENTS

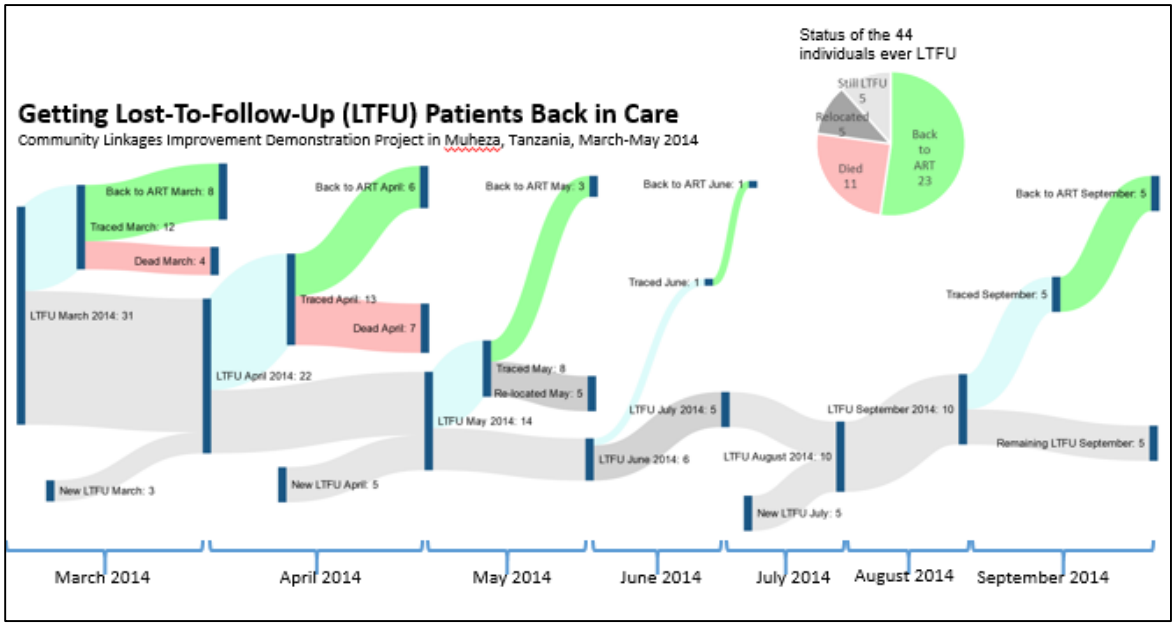
- **Health talks incorporated into community groups' meetings** (Jan – March 2014). ASSIST worked with the HBC providers and community coaches to identify community groups which were ready to incorporate health talks into their regular meetings. These groups were then given orientation to the community health system strengthening approach and now have incorporated health talks at their regular meetings. The ASSIST coordinator and the HBC workers provide coaching to the community QI teams and community groups. The groups were also coached on how to receive and send health information clearly and correctly.
- **The ASSIST coordinator worked with HBC providers and community coaches to select community groups and community QI teams in five villages within the catchment area of Kilulu dispensary and Mkuzi health center of Muheza District** (Jan – March 2014). A total of 27 community groups and five CQI teams were selected in five villages. A sixth village in Muheza District was selected as a control village.
- **Coaches from health facilities conducted a one-day orientation for 27 community groups and five community improvement teams** about each member's role in creating awareness and collecting data of the number of eligible people for HIV testing.
- **The ASSIST coordinator, working with the HBC providers and health facility coaches, coached the community groups to collect data and incorporate health talks in their regular meetings**. The ASSIST coordinator and the HBC providers, with the help of facility data focal persons, community groups (especially PLHIV groups), and treatment assistants managed to trace clients who were lost to follow-up (LTFU). The progress tracking LTFU is shown in Figure 92.
- **During the first QI team meeting (January 2014), HBC providers proposed to focus on increasing the number of people tested for HIV** since the data from the previous few months indicated that the number of people tested for HIV was low.
- **The ASSIST coordinator and HBC providers in Muheza conducted supportive supervision by visiting the health facilities, community QI teams, and community groups to coincide with the groups' regular meetings.** The community group members continued sensitizing their household members to go for HIV testing and go back to the facilities if they had stopped going,

as well as provided support to the HBC providers.

KEY RESULTS

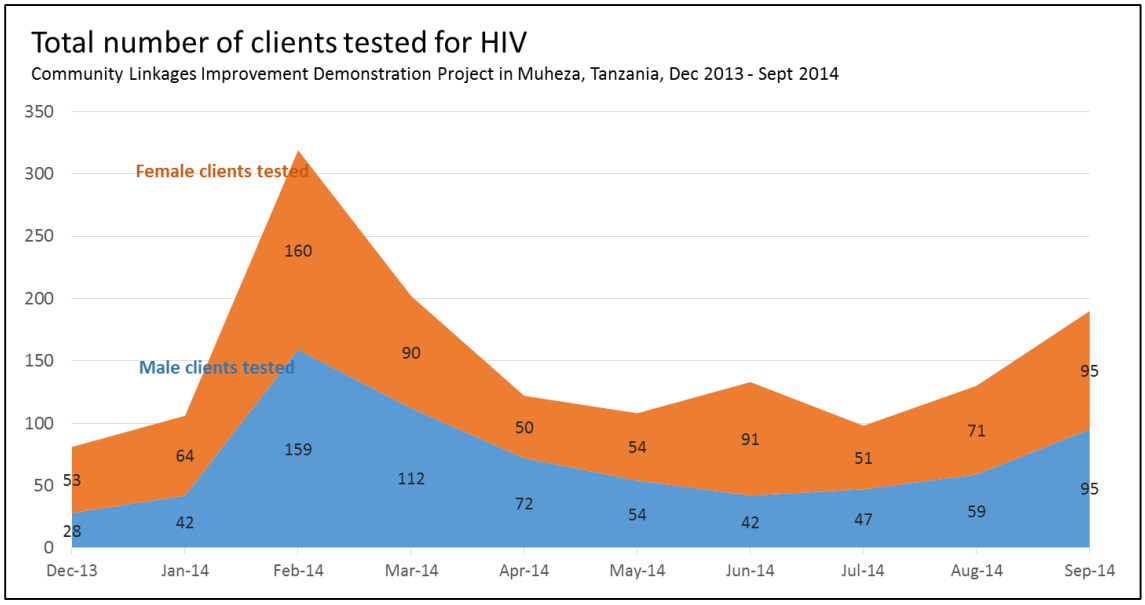
- **Loss to follow-up:** The HBC providers together with the PLHIV support groups traced clients who were lost to follow-up. Those who were found were educated on the importance of continuing with treatment. All accepted to go back to treatment. In September 2014 there were five new patients LTFU. When added to the previous number, 10 people were LTFU, and of these five were traced and put back on ART. LFTU has gone down from 31 clients in March 2014 to 5 by September 2014 and these clients are still been traced. Information about deaths or relocation to other areas was obtained from community group members (Figure 92).

Figure 92: Community health: Reducing loss to follow-up, 5 communities in Muheza, Tanzania (March - Sept 2014)



- **HIV testing:** 1389 clients came for voluntary testing; 95 were HIV-positive and enrolled in care. The number of males accepting to test started increasing steadily during the implementation period. By September, there were equal numbers of males and females. The spike was due to an outreach service which was requested by one of the communities (Figure 93).

Figure 93: Community health: Increasing HIV testing, 5 communities in Muheza, Tanzania (Dec – Sept 2014)



Activity 2. Community Support in Uganda

KEY ACCOMPLISHMENTS

- **Linked with existing community HIV services organizations** (Q1). Developed partnerships with two community HIV services organizations [Mission for Community Development (MICODE) and Health Initiatives Africa (HIA)] to provide complementary HIV care services and linkages for support. Five QI teams carried out joint activities with the organizations which include HIV testing outreaches to help with identification of HIV clients, linking of HIV clients for educational and nutritional support and income generation activities.
- **Conducted learning sessions:** In October 2013, a third learning session was conducted for the 10 villages in one district implementing chronic care activities on sharing and harvesting changes that help identify PLHIV in the community, self-management, and improving clinical status (Q1). A fourth learning session was conducted in February 2014. As a result of this session, a draft change package was developed which highlights changes that help to map PLHIV in the community, support PLHIV self-management, and how to use of mhealth technologies to improve VHT supervision.
- **Conducted coaching sessions:** Conducted coaching sessions in all 10 villages in which approximately 80 representatives participated (January – February 2014). The coaches supported the functioning of QI teams in each of the villages, identified performance gaps, introduced changes to address gaps, and monitored improvement.
- **Used mHealth technologies to improve communication and feedback between VHTs and health facility supervisors.** VHTs were provided with airtime to call their health facility supervisors to receive feedback and supervision on their performance. The number of VHTs receiving feedback and supervision from their health facility supervisors remained under 60% until December 2013. According to VHTs, this interaction with health facility staff helped them receive updated information on HIV care to provider better care to patients in the community and enhance skills. It also helped communities develop confidence and trust in VHT activities.

KEY RESULTS

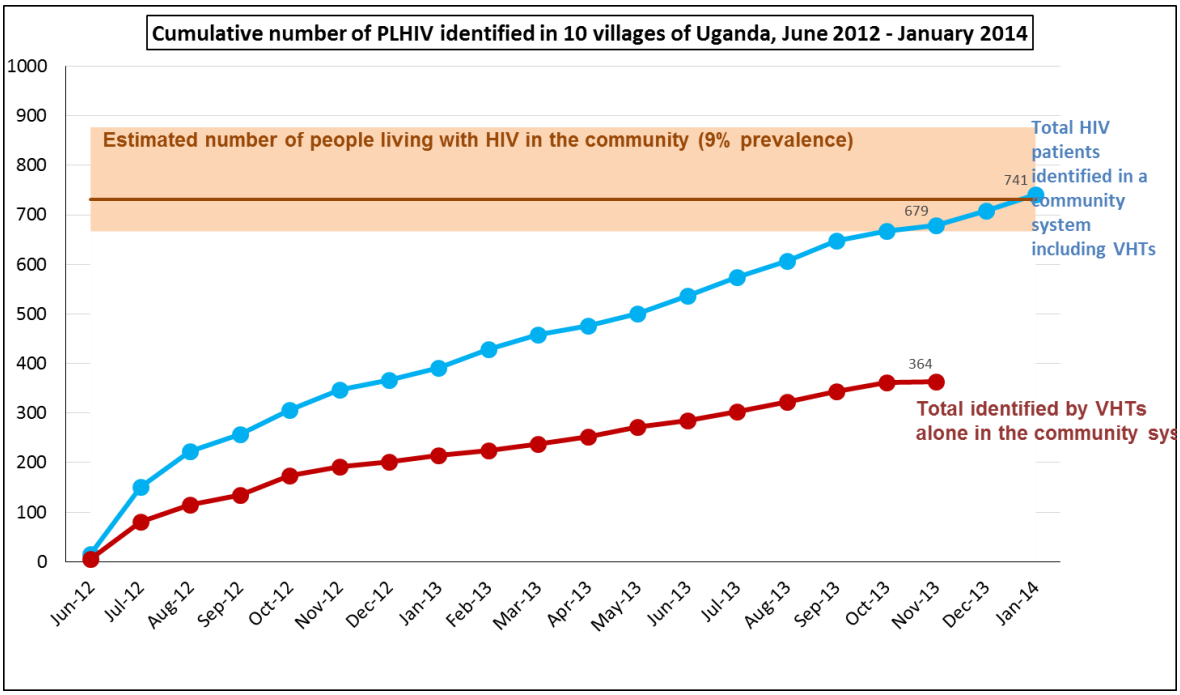
Improvement in Key Indicators

Activity	Indicators	Baseline	Last value
Community Support in Uganda	% of VHTs who received monthly feedback from their supervisors #of PLHIV identified	0% (August '13) 5 (June'12)	91% (March'14) 767 (Feb'14)

	#of PLHIV identified by VHTs % of PLHIV who have developed a self management plan % of PLHIV who have improved clinical status	5 (June'12) 0% (June'12) 29% (July'12)	413 (Feb'14) 100% (Feb'14) 75% (Jan'14)

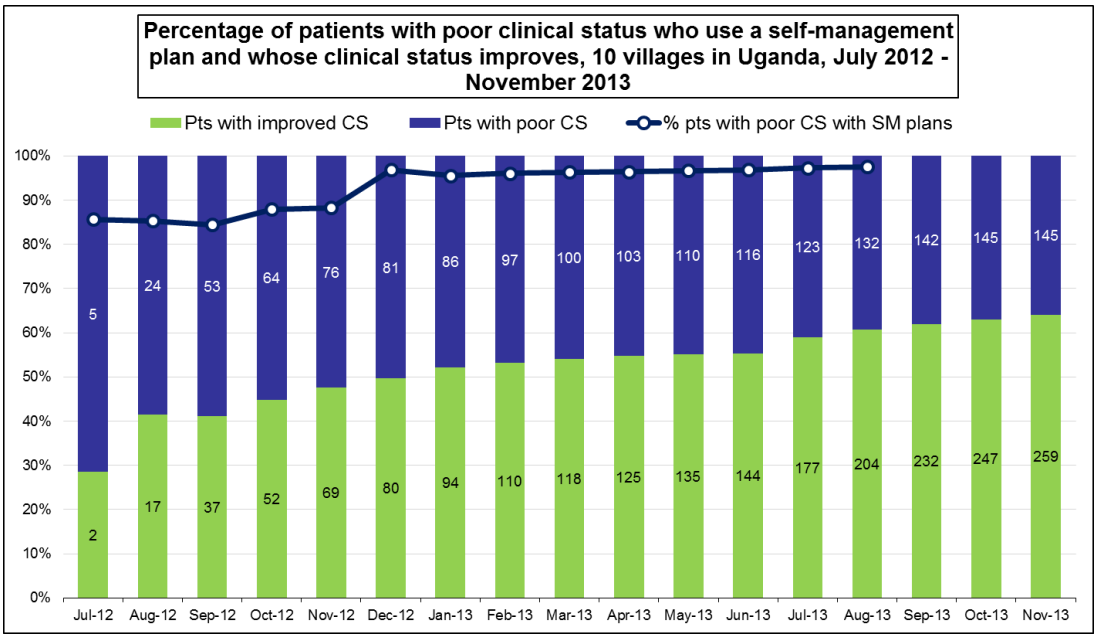
- **PLHIV:** Improvement in the number of HIV patients identified, practicing patient self-management, and with good clinical status was observed from June 2012-February 2014 as a result of the following changes: Door-to-door home visits to families of known HIV patients; health workers linking patients to the community improvement team; patient-to-patient linkages; linking with community HIV services organizations to mobilize PLHIV and refer to the community QI team; sharing lists of VHTs with health facilities for staff to attach patients to VHTs; and using community- and facility-based expert patients to link VHTs to patients.
- Figure 94 shows the cumulative number of HIV-positive individuals identified in 10 villages. It reflects both the PLHIV found by the VHTs alone and those found by the VHTs in combination with the community system. The community system demonstrated a wider reach and was able to identify more cases, reaching the total estimated number of PLHIV in the 10 villages.

Figure 94: Community health: Cumulative number of PLHIV identified in 10 villages, Uganda (June 2012-Jan 2014)



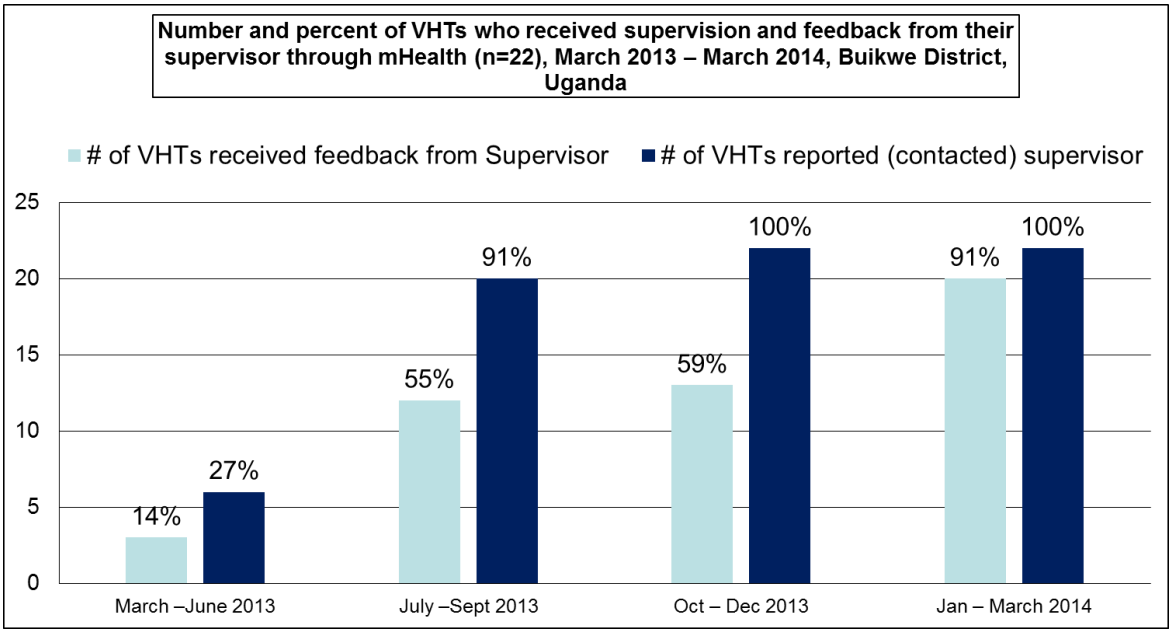
- Figure 95 illustrates the number of patients identified and setting health goals: almost all PLHIV set a goal for self-management of clinical status. This can be explained by the introduction of the individual health goal setting tool which helped community teams keep a record of challenges faced by PLHIV, actions, and progress. A record of the plan was maintained by individual community QI team members to serve as a reminder and plan for focused visits to PLHIV.

Figure 95: Community health: Percentage of PLHIV developing self-management (SM) plan to improve clinical status (CS), Buikwe District, Uganda (July 2012-Nov 2013)



- **mHealth:** Figure 96 shows that feedback and supervision of VHT activities was improved through mHealth. The percentage of VHTs receiving feedback and supervision from their health facility supervisors improved from 59% to 91% from October 2013 – March 2014. VHTs received feedback on tasks accomplished, quality of work, compliments, and learned new skills. As a result, VHTs demonstrated improvement in HIV care skills, such as for example, supporting client disclosure, referral, and counselling.

Figure 96: Community health: Feedback and supervision of VHT activities through mHealth, Uganda (March 2013-March 2014)



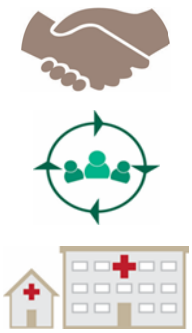
HEALTH WORKFORCE DEVELOPMENT

BACKGROUND

The USAID ASSIST Project is working to develop evidence to promote the application of approaches to not only improve the quality of care, but also to strengthen the available health workforce by improving health worker engagement, performance, and productivity. Building on work from HCI, ASSIST has found that significant improvements in service delivery can be attained alongside improvements in human resources management and health worker engagement when factors affecting performance (also known as *human performance factors*) are addressed as part of the improvement work. The USAID ASSIST Project now applies approaches to address human performance factors as part of the project's improvement activities.

The FY13 ASSIST HWD projects did not receive funding until March 2013, so they continued into FY14. FY14 funds were confirmed in May 2014 and new activities are planned to commence in FY15. ASSIST's HWD work builds on activities carried out under HCI since 2007 in Niger, Tanzania, Uganda, Zambia, and Ethiopia and through global partnerships.

Scale of USAID ASSIST's Health Workforce Development Improvement Work



	Uganda	Tanzania
	MOH	MOHSW
	14 QI teams	6 QI teams
	14 facilities, 3 districts	6 Council Health Management Teams, I region

PROGRAM OVERVIEW

Activities	What are we trying to accomplish?	At what scale?	Improvement Activity	Activity
1. Global technical leadership	• Advance the field of strengthening health workforce through contributing to technical dialogue, global consultation and dissemination	Global		x
2. Tanzania health worker engagement and performance study	• Identify characteristics of an engaged health worker and factors influencing it • Explore the relationship between health worker engagement, performance and retention • Develop and validate a tool to measure health worker engagement	1330 health workers surveyed, 183 health facilities, 6 regions, Tanzania 50 qualitative health worker interviews		x
3. Uganda Village Health Team (VHT) productivity and performance study	• Develop a standardized methodology for quantifying and defining VHT productivity, • Identify factors influencing productivity and performance, and • Explore the relationship between VHT productivity and performance.	Busia District 156 VHT members from 2 sub-counties, Busia district, Uganda		x
4. In-service training (IST) improvement framework	• Raise awareness and increase application of practices that improve IST effectiveness, efficiency and sustainability • Facilitate the development of an evidence-informed national IST strategy in one country	Global Country for assessment to be determined		x
5. Tanzania improvement collaborative for district health management team performance	• Improve performance of Regional and Council Health Management (district level) management teams • Improve district led support for, planning and coordination of improvements in HIV services in health facilities	Lindi region 6/6 districts (overseeing 192 facilities) QI teams: 6	x	

Activities	What are we trying to accomplish?	At what scale?	Improvement Activity	Activity
	• Improve human resources management (orientation, new staff retention, follow up on vacant posts, performance appraisals) • Improve timely receipt and processing of supply orders • Improve accuracy, timeliness and accessibility of the Health Management Information System			
6. Uganda improvement collaborative for pharmaceutical workforce, medicines availability and use	• Strengthen pharmaceutical human resources and develop core competencies to apply improvement approaches • Improve availability of medicines • Improve client retention, medicines use, adherence and outcomes • Improve availability of medicines	3 districts: Bukedea, Jinja, Tororo Health facilities: 14 QI teams: 14	x	

Activity 1. Global technical leadership

KEY ACCOMPLISHMENTS

- **3rd Global Human Resources for Health Forum, Recife, Brazil, November 2013 (Q1).** Provided leadership with USAID and global partners to lead a side session at the Global Health Workforce Alliance 3rd Global Forum on HRH to reach a commitment of stakeholders to harmonize support of community health providers.
  - ASSIST co-authored one of three background papers toward developing consensus among ministries, donors, development agencies, and civil society in a commitment to harmonization of actions, accountability, and research for community health workers.
  - ASSIST presented the paper "Monitoring and Accountability Framework for National Governments and Global Partners, in Developing, Implementing, and Managing CHW Programs."
- **ASSIST launched the in-service training improvement framework with key partners USAID, I-TECH, Jhpiego, CapacityPlus and the CDC supported African Regulatory Collaborative at a joint satellite session, "Transformative Learning for Health Equity" at the Prince Mahidol Award Conference in Pattaya, Thailand** (January 2014).
  - ASSIST and USAID led a session on "Integrating improvement competencies as part of transformative pre-service education reform: building a frontline health workforce of change agents."
  - ASSIST and USAID also led a session on "Transformation across the Health Worker Continuum of Learning: Strengthening Coordination and Collaboration between Pre-Service Education, Continuing Professional Development and In-service Training Systems."
- **Global Human Resources for Health Strategy Working Group on Health Worker Performance and Productivity** (Q2-Q4). ASSIST co-chaired the working group with the International Confederation of Midwives to develop recommendations on the role of standards, quality improvement, and regulation to inform the global human resources for health strategy. The global strategy is being coordinated and led by the Global Health Workforce Alliance and WHO with the collaboration of USAID and key stakeholders. The paper was submitted for public consultation in August 2014.
- **Systematic review of medical education interventions to improve recruitment and**

retention of physicians in rural areas (Q1 – Q4). Working with Harvard Medical School and University of Geneva, ASSIST contributed to a systematic review of curricular interventions in medical education that were designed to improve recruitment and retention of physicians in rural areas. The systematic review was completed and a paper was drafted for submission to a peer-reviewed journal.

Activity 2. Tanzania health worker engagement and performance study

KEY ACCOMPLISHMENTS

- **Data analysis** (Q1). Final data analysis and external review of data analysis completed. Findings summarized for dissemination.
- **Dissemination of findings** (Q1, Q4). Findings presented at the National QI Forum in Dar es Salaam, Tanzania, November 2013; at a USAID Brownbag in Washington DC, USA, September 2014; and the 3rd Global Health Systems Research Symposium in Cape Town, South Africa, October 2014.

Activity 3. Uganda Village Health Team productivity and performance study

KEY ACCOMPLISHMENTS

- **Data analysis** (Q4): Dataset validated, coded, and prepared for analysis in SPSS; initial descriptive analysis completed.

Activity 4. In-service training improvement framework

KEY ACCOMPLISHMENTS

- **Launched the Global Health Worker In-service Training Improvement Framework** (Q1).
  - Framework launched at the 3rd Global Human Resources for Health Forum at a side session held jointly with USAID, CDC, Jhpiego, CapacityPlus, and I-TECH.
  - Session brought together in-service training providers, program managers, funders, researchers, and civil society. Through brief lightning talks, participants gained an understanding of each theme of the IST improvement framework and examples of resources, research findings, and good practice examples. Participants were facilitated through knowledge cafes to network and share lessons learned.
- **Conducted literature review of IST coordination mechanisms** (Q2). Coordinating IST at the national level has recently become a topic of focus in order to track IST efforts, to reduce duplication of IST training efforts, or to address unmet training needs. As such, this literature review was completed to determine, to date, what lessons could be drawn from IST coordination policies for improved coordination among all relevant IST partners in a country. The review identified an absence of literature despite a number of articles recognizing the importance of IST coordination.
- **Commentary on in-service training coordination was drafted, reviewed, finalized and approved for submission** (Q3-Q4). A commentary was prepared together with the ASSIST Swaziland and MOH Swaziland team for the IST Journal Series in the journal *Human Resources for Health* calling attention to the issue of the absence of literature on IST coordination and describing plans in Swaziland towards better IST coordination.

Activity 5. Tanzania district health management improvement collaborative

KEY ACCOMPLISHMENTS

- **Completion of the Tanzania District Management Improvement Collaborative with a harvest meeting in April 2014 that brought together the six Council Health Management Teams (2-3 representatives from each team), several members of the Lindi Regional Health Management Team, and two facilities representatives** (Q2).
  - During the two-day meeting, participants shared best practices that had been developed during the project, lessons learned from addressing gaps in their performance; plans for

sustaining their achievements; plans for making further improvements; and suggestions for overcoming obstacles in the activity.

  - Team members from ASSIST Uganda attended the harvest meeting to share some of the lessons learned in the Uganda pharmacy project, in which district managers had applied improvement practices as part of their coaching facilities toward better practices and as a way to spread and sustain continued quality improvement.
  - CHMT members contributed inputs to developing an assessment tool that could help district managers and improvement advisors see progress in improving the performance in five management function domains. The CHMTs based their input on their own experience and determination of how to define levels of maturity in the quality of performance.
  - CHMT members also contributed to the development of a District Manager's Guide. The draft of this guide was completed in August and will be finalized in FY15 and used to support district management strengthening in other districts of Tanzania.
- **Activity was completed in quarter 3; final product (District Manager's Guide) has been drafted and is under review.**

RESULTS

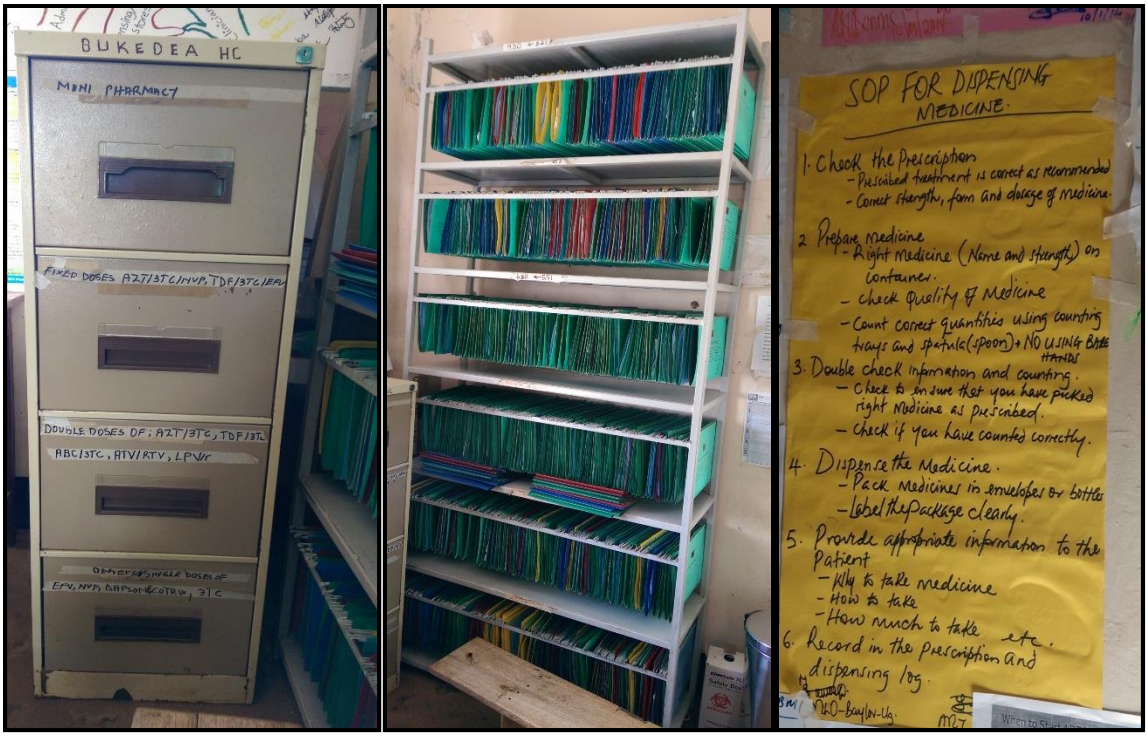
Improvement in Key Indicators

Activity	Indicators	Baseline	Last value
Tanzania district health management improvement	% of facilities that submitted supply orders on time to the CHMT	76% (March 2011)	94% (March 2014)
	% of district level reports that were processed and submitted to the region within two weeks of receipt from the facilities	71% (March 2011)	100% (March 2014)
	% of supply orders which were processed by the CHMT within two weeks of receipt and sent to the RHMT	91% (March 2011)	99% (March 2014)
	% of management team members that have clear and rationalized job descriptions	0% (March 2011)	100% (March 2014)
	% of newly recruited staff that received a technical orientation within two weeks of reporting	53% (March 2011)	71% (March 2014)
	% of newly recruited staff that are retained at 6 months	69% (March 2011)	89% (March 2014)
	% of CHMTs that have QI competencies (self-reported) according to a 11-point questionnaire	0% (March 2011)	75% (March 2014)
	% of health facilities applying improvement approaches to improve quality of health services (out of 192 facilities)	3% (March 20110 10 facilities	13% (March 2014) 22 facilities *Data collected Annually*

Activity 6. Uganda pharmaceutical workforce improvement

KEY ACCOMPLISHMENTS

- **Conducted monthly onsite coaching.** Onsite coaching was provided by district coaches at all 14 sites with a total of 56 coaching interactions (Q1-Q2). The coaching involved supporting the teams to identify gaps in medicines requisition, storage, dispensing, adherence, and appointment keeping. The visits were also used to build the competencies of health worker in improvement, particularly as there were changes in staff and new staff recruited at the start of 2014. A total of 370 health workers were reached during the first two quarters. The coaching in the first quarter mostly focused on addressing gaps in dispensing since this is an area that was identified to still be having gaps. The coaching visits in the second quarter focused on addressing data quality, improving the team's documentation journals, and strengthening the functionality of the improvement teams. Two additional rounds of onsite coaching were conducted in April and May 2014 by district-based coaches. The coaching was aimed at supporting health units to address gaps in requisitioning, storage, and dispensing of medicine in order to improve adherence and retention on ART
- **Held coaches meeting** (February 2014). Each of the district coaches was invited to the ASSIST office in Kampala to attend this meeting. The objectives of the meeting were to plan and develop tools for the upcoming learning session. Coaches reported that the revised coaching guide had greatly improved their performance especially by creating continuity between coaching visits since the previous tools were not adequately doing that.
- **Held second learning session, Mbale** (March 2014).
    - Attended by 72 participants that included representative from all the 14 health facilities, the District Health Officers of Tororo and Bukedea, MOH headquarters staff, and regional and ASSIST coaches. All site participants sat in groups based on their health units and districts. With the support of coaches, they identified quality gaps they had and the changes they developed to deal with those identified gaps, as well as prepared presentations. Sites presented in a plenary and discussions were held. The discussions included changes for sites still having challenges and for those that were performing very well. In addition, they presented on how they are going to sustain the good performance. All sites developed action plans for improvement.
    - All the changes tested by all the teams were compiled into a single document, shared with all the teams for future reference.
- **Exchanged lessons learned with Tanzania District Management improvement collaborative** (March 2014). Two representatives from Uganda attended the District Health Management Improvement Collaborative Harvest meeting in Tanzania. The main objective was to share best practices and lesson learnt on improving district health management and HIV services provided by health facilities within the district. The Uganda teams made a presentation highlighting the work done to improve human resources in the pharmaceutical sector and how that links with clinical outcomes.
- **Completed end line evaluation data collection**
    - Data was collected from all 14 health units in Eastern Uganda that are part of this collaborative using the same data collection tools as baseline in preparation. The health units include Mpumudde HCIV, Walukuba HCIV, Bugembe HCIV, Buwenge HCIV and Budondo HCIV all in Jinja district, Rubongi Military Hopsital, St Anthony hospital, Mukujju HCIV, Mulanda HCIV and Tororo hospital all in Tororo district and Bukedea HCIV, Kachumbala HCIII, Kabarwa HCIII and Kolir HCIII in Bukedea district.
    - Data collected included facility level data that mainly describes the characteristics of the health units, data from clients to gauge the client's understanding of dispensing instructions, individual health worker data to understand their competencies in improvement methodologies, and quantitative data on client level indicators that will enable us understand the impact of the intervention on adherence, retention, and clinical outcomes of ART.
    - Data has been entered into a data base and will be validated and analyzed.



Examples of improvements made by health workers at Bukedea Health Center IV. **Left:** Mini pharmacy in the ART clinic filled with frequently used pre-packed medicines to improve dispensing efficiency and reduce waiting time. **Middle:** Clients charts arranged by serial number to ease record retrieval. **Right:** Dispensing Standard Operating Procedure developed and posted as a reminder of the steps in the medicines dispensing process. *Photos by John Byabagambi, URC.*

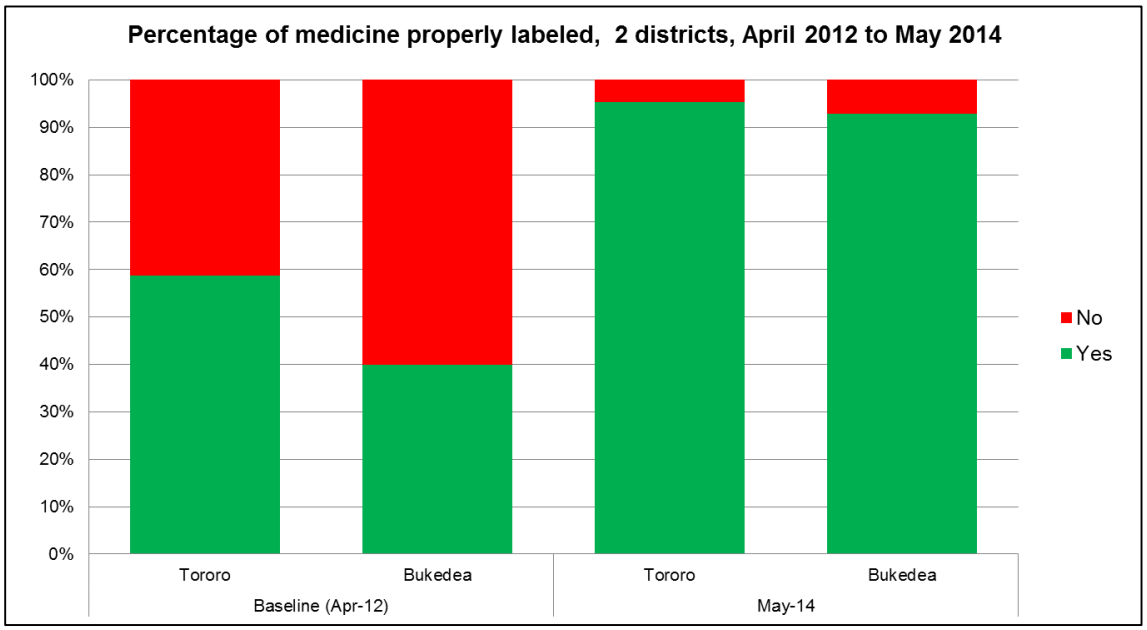
RESULTS

Improvement in Key Indicators

Activity	Indicators	Baseline	Last value
Uganda Pharmaceutical HRH	Percentage of clients with good adherence to ART	72% (Apr 2012)	89% (Feb 2014)
	Percentage of clients with good clinical outcomes	71% (Apr 2012)	96% (Feb 2014)

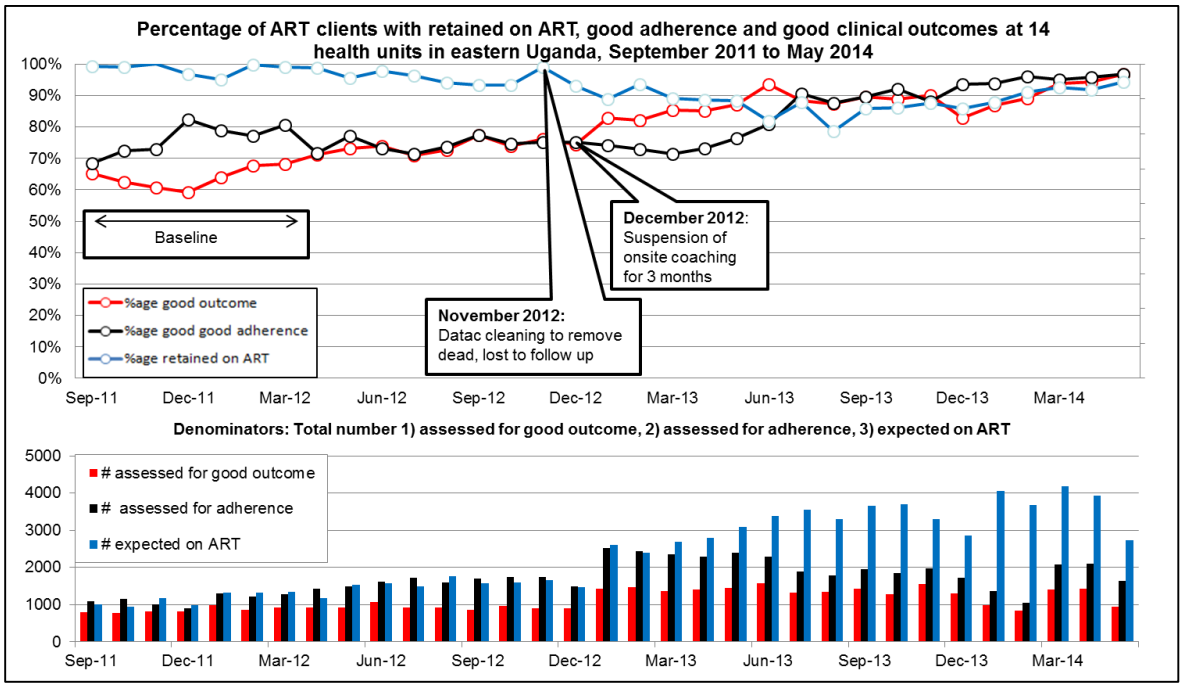
- **Improvements noted in labeling of medicines:** Figure 97 shows the percentage of clients that were properly labeled with name of medicine, dosage, quantity, and instructions on how to take it at baseline in April 2012 and May 2014. It shows that there has been improvement in percentage of medicines which are properly labelled in Tororo and Bukedea districts (data was not collected for Jinja District in May but will be collected as part of the endline assessment in July). Changes that have led to these improvements include assigning more staff to dispensing, giving clear roles and responsibilities to dispensers, and prepackaging of medicines

Figure 97: Pharmaceutical workforce: Percentage of medicine properly labeled, 9 health facilities, Tororo and Bukedea districts, Uganda (April 2012; May 2014)



- **Increase in adherence to ART noted:** Figure 98 shows the percentage of clients with good adherence as defined by the MOH, percentage of clients with good clinical outcomes on ART, and percentage of clients retained on ART at 14 health centers in Eastern Uganda. It shows a gradual increase from an average of less than 80% to an average of 90% for adherence to ART. The baseline indicates that percentage of clients retained on ART was good, however, after data cleaning, it declined to 90%. Sites were supported to address gaps in retention on ART and it has since improved to over 90%.

Figure 98: Pharmaceutical workforce: Percentage of ART clients with good adherence, retained on ART and good clinical outcomes, 14 health units, Eastern Uganda (Sept 2011 – May 2014)



HIV AND AIDS: CHRONIC CARE AND PREVENTION AND TREATMENT

BACKGROUND

The USAID ASSIST HIV and AIDS prevention and treatment activities began in December 2012. The ASSIST HIV portfolio is comprised of five activities. Two of these activities – PMTCT in Tanzania (AIMGAPS) and injection safety in Swaziland – were initially funded under HCI. AIMGAPS was continued under ASSIST with the prime focus of compiling and packaging knowledge from the ongoing demonstration projects. The current ASSIST injection safety activity combines both an improvement activity and an implementation study and has been ongoing in Swaziland since FY14. Though there was a chronic care activity funded under HCI, the current ASSIST activity combined both an improvement activity and an impact evaluation and is being implemented in two new districts in Uganda. In addition to activities focusing on PMTCT, injection safety, and treatment, USAID ASSIST has also been supporting an activity to improve the quality and safety of voluntary male medical circumcision (VMMC) in Uganda since 2013.

Scale of USAID ASSIST's OHA-funded HIV and AIDS Improvement Activities

	VMMC (Uganda)	Chonic Care (Uganda)	Injection Safety (Swaziland)
	10 IP	1 IP	--
	30 QI teams	6 QI teams	4 QI teams
	49 facilities, 40 districts	6 facilities, 2 districts	20 facilities, 2 regions

PROGRAM OVERVIEW

Activities	What are we trying to accomplish?	At what scale?	Improvement Activity	Activity
1. Assuring Infants and Mothers Get All PMTCT Services (AIMGAPS): Integration and continuity of care for PMTCT (Tanzania)	• Develop a change package for increasing access to PMTCT services.	For global use Synthesis will include best practices from 11/176 PMTCT facilities in 4 districts of Iringa Region		x
	• Develop in-country capacity to support improving activities of PMTCT services	Iringa Region:4/4 districts; 26/70 RHMT and CHMT members in the region		

Activities	What are we trying to accomplish?	At what scale?	Improvement Activity	Activity
2. Integrating quality improvement in voluntary male medical circumcision (VMMC)	• Improve the ability of local officials and programmers to continuously monitor, evaluate, and improve their VMMC programs • Increase our knowledge of how health systems should adapt to best accommodate and integrate VMMC programs • Increase uptake of VMMC through utilizing various changes, including female partner involvement • Generate new knowledge materials related to VMMC to facilitate the spread of improvement knowledge	Provide support to the MoH 49 sites in 40/112 districts directly supported by ASSIST and selected extra implementing partner's sites Regional Referral Hospital 5 General Hospitals 14 HCIV 17 HCIII 6 HCII 1 Military hospitals 5 Mobile van 1	x	
3. Refined chronic care model (CCM) implementation and impact evaluation (Uganda)	• To improve care for people living with HIV through the implementation of an adapted, chronic care model. Improved care is measured using measurable patient outcomes and the ART framework which monitors closing the access, retention, and adherence gaps (Uganda) • To evaluate the impact of an adapted CCM model on quality of HIV/Chronic Care services and measurable patient outcomes	6 facilities in 2 districts – Mityana (3 intervention sites) and Nakaseke (3 control sites): 1 hospital, 1 HC IV and 1 HC III in each district out of a total of 10 accredited ART health facilities in both districts 6 QI teams; 1 at each site	x	
4. Chronic Care Model Toolkit (including expert patient guidance) - Uganda and Tanzania	• Create a CCM toolkit that provides guidance for designing services to address the chronic nature of HIV and non-communicable conditions. This will provide a blue-print to be used in management HIV ,and other chronic conditions in different country programs	N/A		x
5. Injection safety (Swaziland)	• Apply improvement principles to improve safe injection practices**;** implement proper waste management practices; and increase health care worker safety.	Swaziland - 20 intervention sites in 4 regions: 11 hospitals, 1 health center, 5 public health units and 3 clinics 4 QI teams at present but will be expanded to 20	X	

Activity 1. Assuring Infants and Mothers Get All PMTCT Services (AIMGAPS): Integration and continuity of care for PMTCT (Tanzania)

KEY ACCOMPLISHMENTS

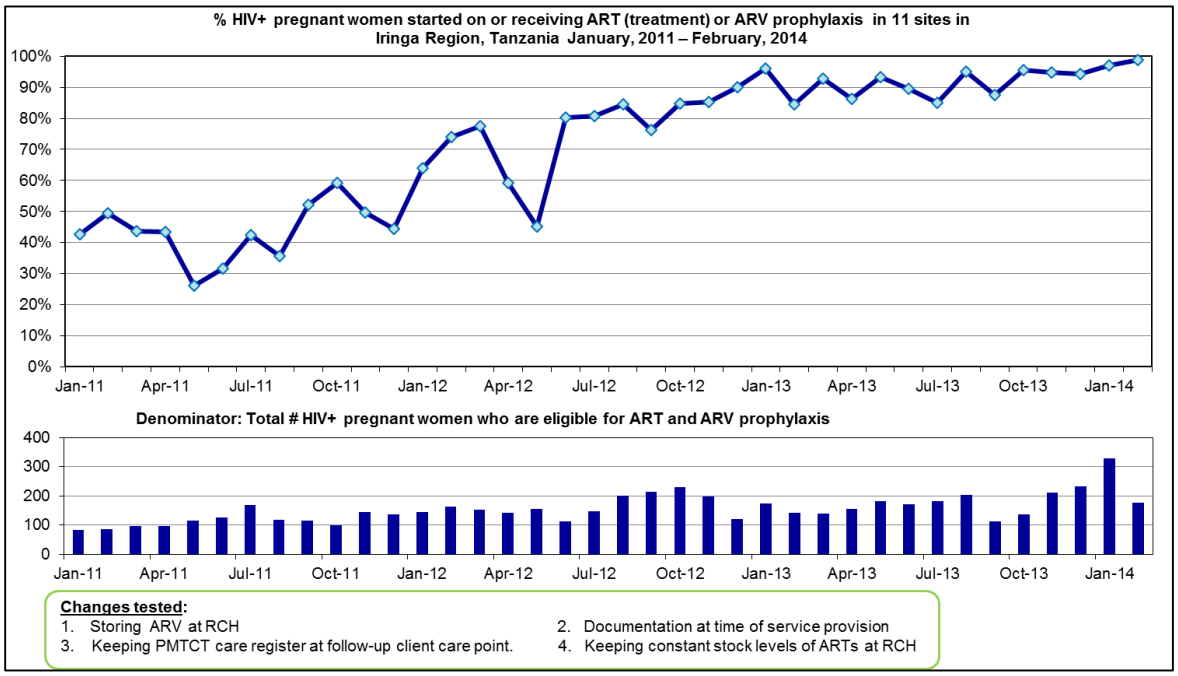
- **During Q1-Q2 AIMGAPS** sites transitioned to Option B+. Council Health Management Teams have supported sites on documentation, data collection from new tools, and ensuring availability of ARVs. Data for all HIV-positive pregnant and lactating mothers at Option B+ sites is entered to the database on weekly or monthly basis depending client load. Initially the Option B+ sites experienced shortage of ARVs and patients' cards [CTC1 and HIV Exposed Infant (HEI) cards].

Responding to these shortages, CHMTs applied QI knowledge to address the shortages through:
  - Redistribution of ARVs among sites providing PMTCT services
  - Ordered additional stock of ARVs from Medical Stores department which were supplied and currently have enough stocks
  - Photocopied HEI and CTC1 cards to ensure each child and mother has the card
- Facilities implementing community linkages continued to support community QI teams in two wards (Kihorogota and Nzihi) where at least one community QI meeting was conducted for each village.
- **Conducted endline assessment for AIMGAPS, four districts, Iringa Region** (February 2014): Regional and District Reproductive and Child Health Coordinators participated in the activity. The assessment covered qualitative and quantitative components. The qualitative component focused on obtaining perspectives of services from clients, providers and community quality improvement teams. Eleven in-depth interviews were conducted with service providers and with 32 clients. Members of community quality improvement teams from 11 villages implementing the community component of AIMGAPS were involved in focus group discussions to gain their insights on involving community groups to improve PMTCT service uptake and retention. The quantitative component entailed retrospective data collection from 543 client records to determine services received by HIV positive women during ANC, labor and delivery,and during the postnatal and child follow up. Treatment Option B+ for PMTCT was rolled out in all 11 AIMGAPS sites in October 2013.
- **Conducted AIMGAPS Harvest Meeting** (May 2014): The meeting was attended by 11 facility QI teams comprised of 22 QI team members and four District Reproductive and Child Health Coordinators. The Regional Reproductive and Child Health coordinator and Monitoring and Evaluation officer from Minister of Health and Social Work (MOHSW) were among the team of facilitators. As part of the harvest meeting a knowledge café was conducted. Participants were supported to go through four rounds in the knowledge café to document, rate and aggregate tested changes around eight domains of PMTCT care: 1) access to care; 2) provision of ARVs, cotrimoxazole and supply chain; 3) infant feeding; 4) early infant diagnosis; 5) retention in care; 6) community linkages; 7) quality improvement; and 8) data use.
  - Results: Identified high ranking tested changes for the identified gaps: on job training and orientation of service providers on proper documentation; group and individual counselling; supplies and logistics management of ARVs; involvement of community groups to advocate for reproductive health issues at household level; counselling HIV-infected pregnant women on the importance of receiving and taking ARVs for treatment or prophylaxis; prioritizing pregnant women accompanied by their male partners for care at ANC; and formation community quality improvement teams to successfully link facilities with the communities in its catchment area.
  - Change package: A change package detailing the identified gaps, tested change(s), number of sites that tested the change, and how it was tested was compiled to advise new teams. The identified gaps were: Men not accompanying their pregnant female partners to ANC; HIV infected pregnant women not enrolling into care and treatment center (CTC) for HIV services; HIV infected pregnant women not being initiated on or receiving ARVs or ART; lack of testing HIV exposed infants (HEI) 4-6 weeks after birth; HEI not receiving a confirmatory HIV test 6 weeks after cessation of breastfeeding; HEI not being brought back for follow-up appointments. The change package will be finalized in FY15.

RESULTS

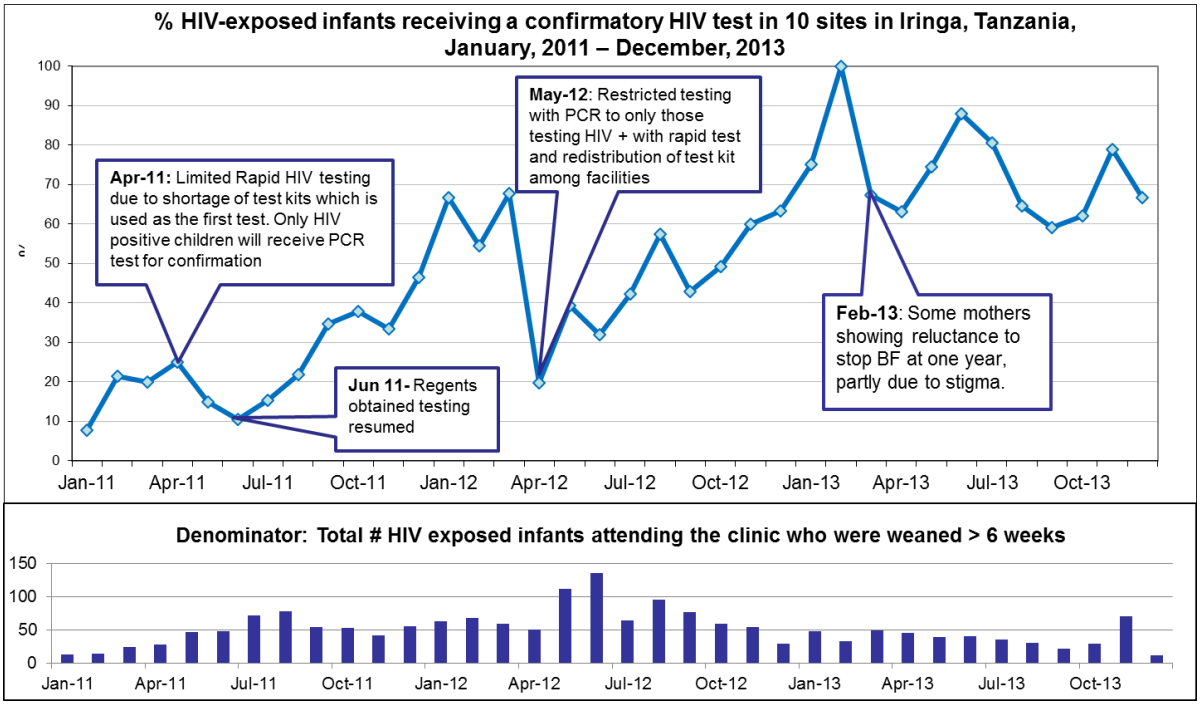
- **Increased HIV-positive women on ART:** Figure 99 shows that the proportion of HIV-positive women starting on or receiving either ARV prophylaxis or ART continued to increase until January 2014, nearing 100%.

Figure 99: AIMGAPS: Percentage of HIV-positive women started on or receiving ART or ARVs in Iringa, Tanzania (Jan 2011 – Jan 2014)



- **Increased HIV testing of HIV-exposed infants: Definitive testing of HIV-exposed infants has continued to remain around 60% (Figure 100).** Facilities implementing the community component of AIMGAPS, continued to support community QI teams in two wards (Kihorogota and Nzihi), where at least one community QI meeting was conducted for each village.

Figure 100: AIMGAPS: Percentage of HIV-exposed infants receiving a confirmatory HIV test, Iringa, Tanzania (Jan 2011-Dec 2013)



Activity 2. Integrating quality improvement in voluntary male medical circumcision (VMMC)

ACCOMPLISHMENTS

- **Conducted coaching visits** (Q1-Q4): Teams led by ASSIST with representatives from the District Health Office (DHO) and the implementing partner conducted monthly on site coaching sessions at each of the 30 sites. The purpose of these sessions was to provide ongoing support to the health unit quality improvement teams to identify and address emerging gaps within their male circumcision clinic. In addition, they helped institutionalize the improvement processes through building coaching skills of the district team and to spread improvement methodology through building skills of staff from the health care facility and IPs.
- **Held seven learning sessions**: During this year, two learning sessions were held in each of the three regions where USAID ASSIST has being supporting sites. In addition a 7th learning session was held in Kampala in November 2013, with attendance from members of the PEPFAR team. In addition to participants from several SMC sites, attendees also included representatives from the District Health Office where the sites are located and a representative from the supporting implementing partner. Additional attendees included representatives from USAID/W, CDC/Atlanta, CDC/Mozambique, CDC/Uganda, DoD, and OGAC who stayed either in entirety or in parts for the learning session.
- **Supported the National Safe Male Circumcision Task Force (NTF)**: As part of its technical support, USAID ASSIST supported the MOH to convene the quarterly SMC NTF meeting on February 25, 2014 in order to provide oversight to the national program. The meeting was attended by MOH staff; staff from the in-country SMC PEPFAR Technical Working Group; representatives from WHO and representatives from USG-funded SMC implementing partners. The main items on the agenda were to discuss how to integrate the non-surgical (Prepex) method of circumcision into the program. A team to review the current tools and to integrate Prepex was formed. It was resolved that an IP supporting quality improvement should be a member of this team.
- **Conducted a baseline assessment for 20 new spread sites** (May 2014): In May 2014, the team scaled up to 20 new intensive support sites. Site assessments were jointly conducted with IPs, MOH representatives, and district health officials. All sites were assessed against national SMC quality standards. Notable was the absence of functional quality improvement teams at the new sites. On average, most sites were within the red and yellow codes on the dashboard. Figure 101 shows performance of the spread sites against national SMC quality standards.
- **Conducted a harvest meeting** (June 2014): A team of 30 participants from sites across Uganda took part in discussing and documenting (harvesting) the learning that has taken place since inception of safe male circumcision improvement work. During the meeting, sites held group discussions on changes that have been tested for improvement which are being compiled into a change package.

Figure 101: VMMC: Baseline dashboard results of spread sites, Uganda (May 2014)

Health Unit District IP Supporting Site	Management systems	Supplies, equipment & environment	Education and IEC	Individual Counseling & HIV testing	Surgical Procedure	M&E	Infection Prevention
Wakiso Community Health Plan	40	50				50	70
Bumanya HCIV	80	83	75			57	84
Kojja HCIV, MUWRP, Mukono	80	84				65	85
Iganga Islamic medical centre	50	34				28	40
Nankandulo HCIV	80	50				72	77
Butebo HCIV	60	67	50		93	29	85
Nabiganda HCIV	50	50	0			15	56
Moroto Regional Referral Hospital	50	67				50	92
Moroto Sector Field Hospital	70	50				57	
Nabilatuk HCIV	50	67				21	77
Kotido HCIV	50	50				21	69
Kiwoko Hospital	80	100				43	100
Achol Pii Military Hospital	60	33	67	67	80	50	60
Pajule HC IV	22	50	0	22	23	14	36
Dokolo HC IV	50	50				14	77
Mubende Referral Hospital	70	33	100	82	72	29	85
Maparo HCIV Kabale	80	50	50	50	70	21	50
Ruhoko HCIV HCIV Ibanda	100	100	50	50	70	21	90

Key	
>80% Good	
50%-80% Fair	
<50% Poor	

- **Performance on quality indicators**: For the period March to June 2014, in collaboration with implementing partners, district health officials, and MOH, all sites were supported to come up with changes for improving SMC quality indicators in the original 30 sites. These improvements continued into Q4. The main improvements during that quarter were noted in the following areas:
  - Client follow-up: At baseline, most sites did not know the importance of client follow-up post circumcision procedure, and staff told clients to return only if they had a problem. Health workers were oriented on the importance of follow-up, and as a result incorporated the importance of follow-up in their group education sessions, emphasizing that clients should return for bandage removal. With this, follow-up improved from 32% in one site (May 2013) to a peak of 96% in December 2013 and has since been sustained at greater than 80%. For all sites reporting, we see that there is a drop in May 2014 which was the result of one site scaling up circumcision through outreach with over 3000 clients getting circumcised in one month but the site was not well prepared to follow up the clients. This site accounted for about 30% of all procedures done in April and 37% of all procedures done in May. The follow-up at that particular site was 19% and 32% for April and May, respectively. Overall client follow-up has increased to greater than 90% in August 2014. Other changes tested included: returning to outreach sites to follow up clients, using VHTs to remind clients to return for follow-up, improved record keeping, and assigning staff to specifically follow up clients.
- **Conducted coaching visits to new sites**: ASSIST began providing intense support to 19 new sites. The first coaching sessions to the new sites were conducted, and as a result these sites have started registering improvements in various indicators.
- **Participated in joint PEPFAR SMC data quality assessment (DQA).** In July 2014 an inter-agency PEPFAR team conducted a data quality assessment at selected SMC sites in Uganda. ASSIST actively participated in this exercise by working with the PEPFAR team to identify sites for the DQA. Preliminary results indicated that ASSIST supported sites had better data management systems in place. We also noted poor spread of best practices by IPs from ASSIST-supported sites to other IP sites.

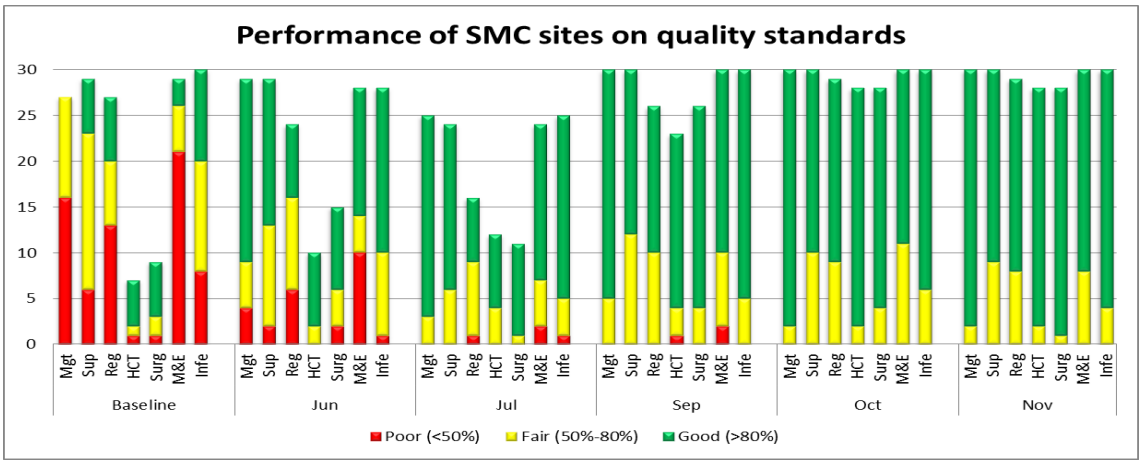
RESULTS

Improvement in Key Indicators

Activity	Indicators	**Baseline** (Jan 2013)	**Last value** (August 2014)
Integrating quality improvement in voluntary male medical circumcision	• Proportion of clients counselled and tested for HIV during SMC	73% (15 sites)	99% (16 sites)
	• Proportion of clients assessed for STI before surgery	81% (19 sites)	100% (17 sites)
	• Proportion of circumcised clients with documented consent	83% (19 sites)	100% (17 sites)
	• Proportion of clients experiencing adverse events following SMC	0.9% (9 sites)	0.4% (17 sites)
	• Proportion of clients that return for 48 hour follow-up post-operatively	18% (7 sites)	92% (17 sites)
	• Proportion of clients that return for 7 day follow-up post operatively	59% (7 sites)	76% (16 sites)
	• Proportion of clients that return for 6 weeks follow-up post-operatively	0% (4 sites)	4% (7 sites)
	• Proportion of clients attending group education with partners	0% (1 sites)	13% (10 sites)
	• Proportion of clients having HCT with their partners	0% (1 sites)	100% (11 sites)

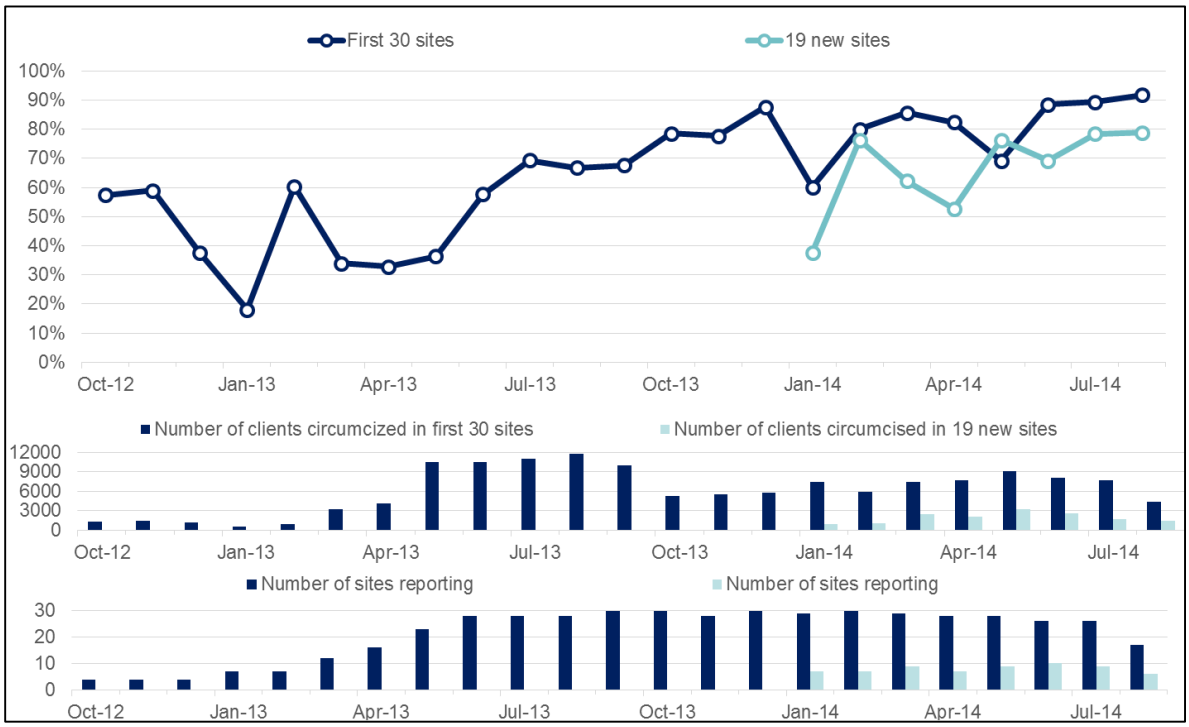
- **Improvement in SMC quality standards at all supported sites**: As shown in Figure 102, there has been marked improvement in all the standards at the 30 sites over time. During the reporting period, all sites managed to move out of "red" in all the areas that were assessed. The proportion of sites that are still fair (yellow) in some areas is also on the decrease as there is more "green" and less "yellow" in the graph. Sites are now being supported to sustain the gains achieved.

Figure 102: VMMC: Performance of sites on quality standards, Uganda (June-Nov 2013)



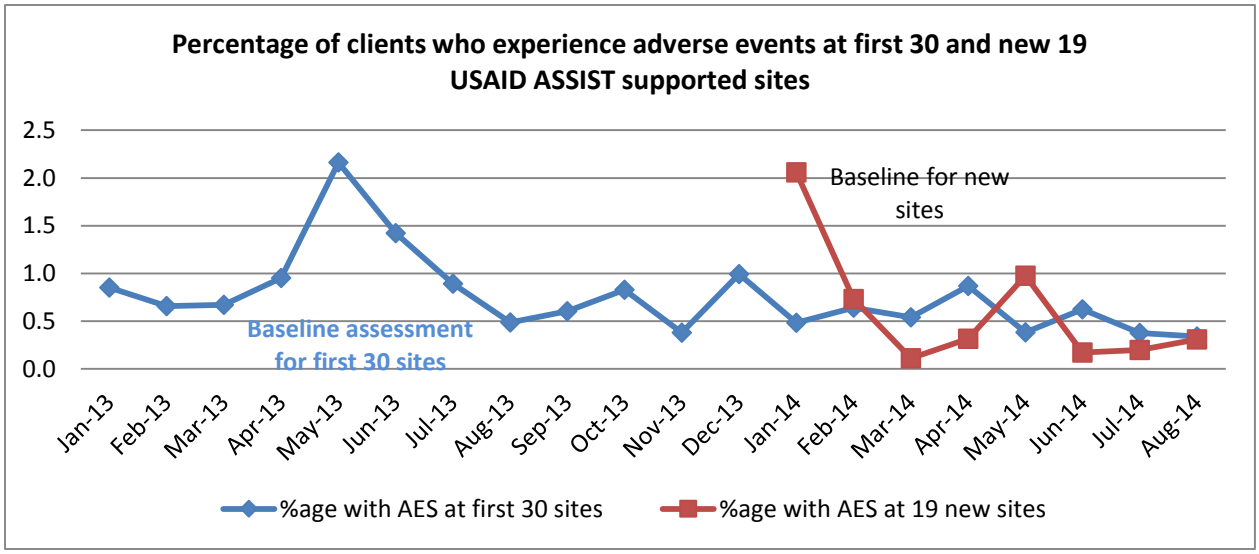
Improvement in percentage of VMMC clients who returned for follow-up. Figure 103 shows that in the first 30 sites, 48-hour client follow-up has improved to more than 90%. For the 19 new sites, at baseline, there was still a problem with client follow-up, suggesting that IPs were not effectively spreading lessons learned from ASSIST-supported sites to other sites. Prior to ASSIST intervening directly in those sites, 48 hour follow-up in January 2014 was at 27%; however, since ASSIST began providing direct coaching to the 19 new sites, 48 hour follow-up increased to 74% in August 2014.

Figure 103: VMMC: Percentage of clients who returned for 48-hour follow-up post circumcision, Uganda (Jan 2013 – May 2014)



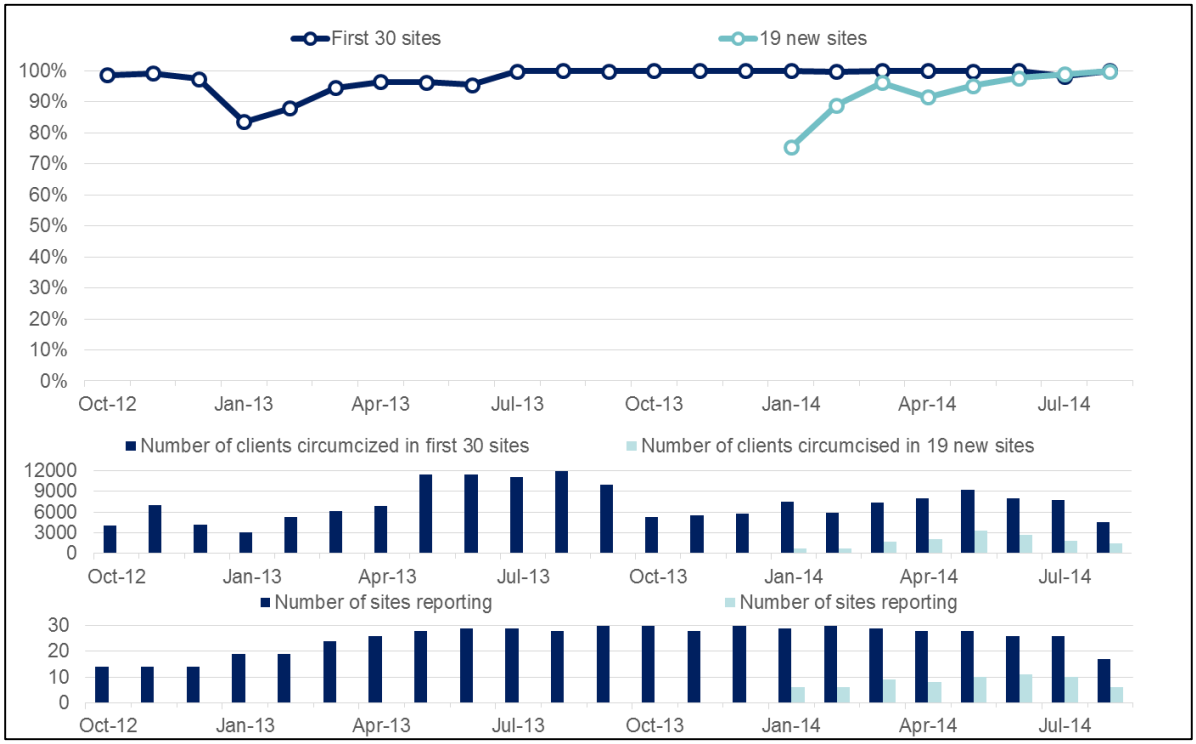
- **Assessment of clients for sexually transmitted infections (STIs):** At baseline, records showed that about 20% of the clients were not being assessed for STI prior to circumcision across all sites. Data showed that less than 5% of the clients were assessed for STIs. Problem analysis revealed that health workers had no knowledge of the importance of screening clients for STIs prior to circumcision. An orientation on importance of screening clients for STIs was done and improvement noted thereafter. Another change tested was for circumcisers to review all forms to find out whether clients were assessed before circumcision; this has maintained performance to approximately 100% across all sites.
- **Rate of adverse events:** Figure 104 shows that rate of adverse events (AEs) remained at or below 1% in the 30 original sites. In the 19 new sites, AEs were 2% (6 sites reporting) at baseline and have decereased to 0.3% (2 sites reporting) in August 2014. Again this suggests that IPs were not effectively spreading what was learned in the 30 sites to their other supported sites.

Figure 104: VMMC: Percentage of clients who experience moderate to severe adverse events after circumcision, 30 original and 19 new ASSIST-supported sites, Uganda (Jan 2013 – Aug 2014)



- Figure 105 shows that by July 2013 in the 30 initial sites, there were no more gaps related to obtaining client consent. In the newly supported sites, in January 2014, only 67% of clients had their consent documented. This is also a clear indication of weak spread of best practices between sites without the intervention of ASSIST.

Figure 105: VMMC: Percentage of clients with documented consent in initial supported 30 sites and newly supported 19 sites, Uganda (Oct 2012-Aug 2014)



The dashboard shown in Figure 106 of the 19 new supported sites shows that improvement has been slow to take place. This has been due to various challenges including the following:

- Implementing partners were involved in training staff on Prepex (the new nonsurgical circumcision device).
- In a few cases, implementing partners' agreements/contracts have ended, and either new partners that have not worked with ASSIST are now supporting the sites, or there is no current implementing partner in place.
- The following sites have shown improvement:
  - Kiwoko Hospital: In monitoring and evaluation, at baseline this site scored a 43 and in August, it is now 78.
  - Achol Pii Military Hospital: At baseline, scored poorly for supplies, equipment, and environment; and scored fair for monitoring and evaluation and infection control. In August, this site now scored fair for supplies etc. and good for monitoring and evaluation and infection control.
  - Pajule HC IV: This site scored poorly at baseline for supplies, etc. but by August received a score of good.

Activity 3. Refined CCM implementation and impact evaluation (Uganda)

ACCOMPLISHMENTS

- **Teams continued to improve the quality of medical records, which was a focus for the previous quarter**. The first learning session was held in October 2013. Twenty-seven participants attended including facilitators; 13 health workers from health facilities; three from the district health office; two from Mildmay Uganda (the implementing partner), and two from Buikwe District,where CCM was initially piloted. A team from USAID ASSIST, MOH AIDS Control program, and two MOH regional improvement coordinators facilitated the learning session. The objectives were to: 1) enable sites to share successful interventions, good practices, and challenges noted during the last action period; 2) enable sites to synthesize best practices for implementing chronic care model for HIV care and learn from one another; 3) identify and document site-level sustainable improvement changes that have led to improvement; and 4) facilitate sites to develop action plans to help achieve site-level improvement aims. At the end of the session, teams identified improvement aims to focus on during the quarter and developed a plan to achieve them which included ensuring that patients on ART remain in care and have better treatment outcomes.
- **Monthly coaching**: The learning session in October was followed by monthly coaching to support sites to achieve their improvement aims.
  - October 2013 coaching focused on supporting sites to implement changes to ensure that at least 80% of patients on ART have better clinical outcomes. Focus was on strengthening TB-HIV co-infection management. Baseline data was shared during the learning session so that teams could develop realistic plans to improve TB-HIV co-infection management.
  - November coaching focused on review of CD4 and retention data to ensure sites worked towards: 1) increasing the proportion of patients with stable or increasing CD4 count for the last 6 months, and 2) decreasing the percentage of patients on ART that are lost to follow-up
  - December coaching focused on follow-up of action plans. Information on success stories about reducing wait time at Mityana and St. Padrepio was collected.
- **During Q2 interventions focused on**: 1) facilitating facility teams to synthesize best practices and accelerate learning among teams; 2) identifying and documenting site level sustainable improvement changes that have led to improvement, including details of how they were implemented; and 3) planning and conducting the end line evaluation.
- **Conducted 2nd learning session for three sites in the Mityana District involved in improving HIV chronic care** (Feb 2014). The learning session had 27 participants and was facilitated by staff from ASSIST, Buikwe District that previously participated in the chronic care work under HCI, and representatives from Mityana's District Health Office. Sessions were organized in such a way that adequate time was allocated to discussing each improvement aim. Two facilitators were allocated to each session; one to chair, and the other to record changes implemented by sites including details of how they were tested.

Figure 106: VMMC: Dashboard showing the performance of the first 30 sites on quality standards at baseline (February-May 2013) and as of August 2014, Uganda

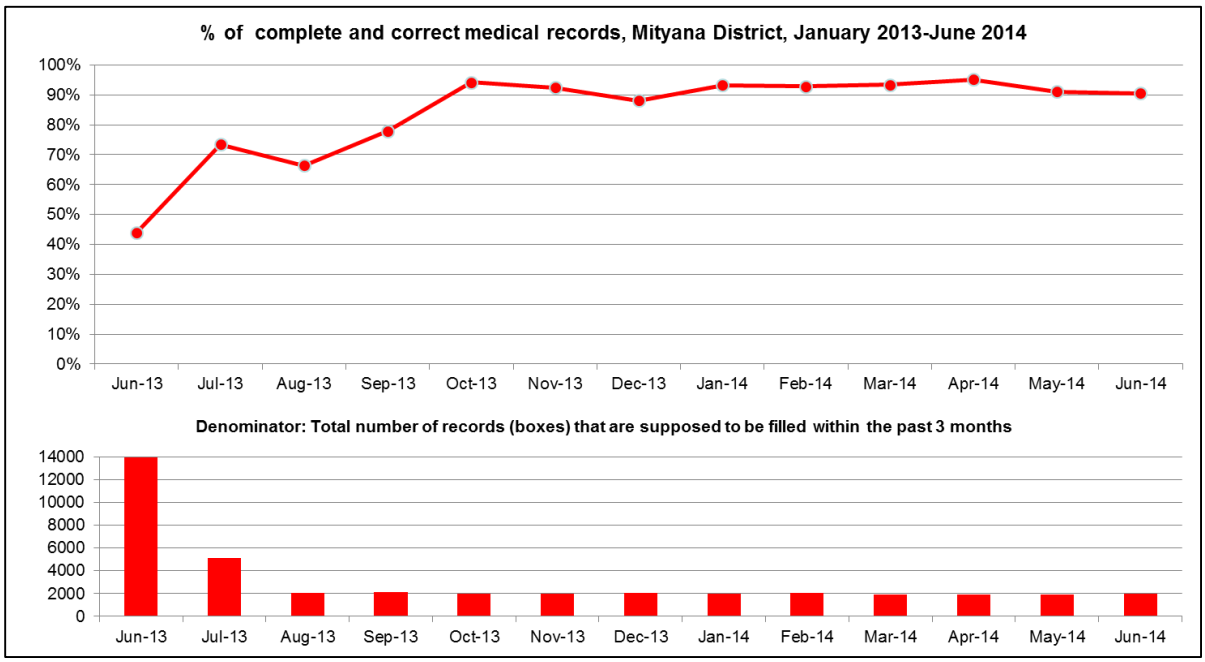
PERFORMANCE OF SITES ON VMMC QUALITY AREAS

>80% - Good	50 - <80% - Fair	<50% - Poor	Not assessed

Health Unit IP Supporting Site District	Baseline Feb-May 2013							Aug-13						
	Management systems	Supplies, equipment & environment	Registration group education and IEC	Individual counseling & HIV testing	Male circumcision surgical procedure	Monitoring & evaluation	Infection prevention	Management systems	Supplies, equipment & environment	Registration group education and IEC	Individual counseling & HIV testing	Male circumcision surgical procedure	Monitoring & evaluation	Infection prevention
Kinyara HCII, Masindi,HIPS	30	50	0			33		50	50				64	75
Mabale HCII ,HIPS, Kyenjonjo	20	33	0			7	92	80	67	80			87	92
Lugazi Mehta, HIPS, Buikwe	40	83	0			14	84.6	80	83	83	67	70	79	92
Kitgum general Hospital Kitgum NU-HITES	30	50	0			18	82	90	83				71	100
Apac Hospital Apac NU-HITES	20	33	0			14	80	100	100				93	100
Anaka Hospital Nwoya NU-HITES	10	50				7	70	80	100				93	91
Kulva Hospital, IRCU, Arua	40	50	50			75	60	90	67	87	83	80	93	67
Ishaka Hospital, Bushenyi	50	50	25			14	77	90	100	83	100	90	86	85
Mengo Hospital, IRCU, Kampala	60	50	83	39	64	29	92	100	67	100	100	100	86	100
Gulu Regional Referral Hospital,	20	50	50			0	33	70	100	83	40	90	93	80
Kabale Regional Referral, SUSTAIN, Kabale	33	25	0			0		80	80	67	67	80	77	75
Fortportal Regional Referral Hospital	25	33	0				70	100	83	100	80	83	100	92
Nsinze HCIV, STAR EC, Namutumba	60	67	75	83	81	14	80	90	100	100	100	100	79	85
Buyinja HCIV, STAR EC, Namayingo	70	50	25			50	80	100	83	100	100	100	86	92
Bugiri Hospital, STAR EC, Bugiri	60	33	25			50	90	90	100	100	100	82	86	80
Kibuli Police Training School HCIII, SPEAR Kampala	30	67	100			14	58.3	100	100	100	100	100	100	100
Murchison Bay Hospital, SPEAR, Kampala	40	83	75	100	100	14	84.6	100	67	100	89	100	86	92
Masaka Police Clinic HCIII, SPEAR, Masaka	70	67	100	67	100	69	75	100	67	100	100	100	100	80
Bugangari HCIV, STAR SW, Rukungiri	40	50	0			21	100	100	83	83	80	97	100	100
Kabuyanda HCIV, STAR SW, Isingiro	60	50	0			21	92	100	83	83	83	85	93	85
Kisoro HCIV, STAR SW, Kisoro	70	50	0			21	77	90	80	83	94	80	75	76
Kayunga Hospital, MUWRP, Kayunga	80	83	100			93	100	90	100	100	100	97	79	100
Mobile Van, MURWP	70	100	100	100	100	93	100	80	100	83	100	92	86	100
Mukono HCIV, MURWP, Mukono	70	100	100	100	100	93	100	80	83	100	100	94	86	92
Budaka HCIV, STAR E, Budaka	60	50	100			46	100	90	100	100	100	91	79	100
Busolwe Hospital, STAR E Butaleja	60	33	50			15	76.92	90	67	100	100	91	79	92
Kibuku HCIV, STAR E, Kibuku	40	83	75	100	100	75	100	90	100	100	100	91	93	92
2nd Division Military Hospital, RTI, Mbarara	20	50			78	15	50	90	75	50	94	87	93	90
General Military Hospital, RTI, Luwero	22	67	67		47	29	85	80	83				86	91
4th Division Military Hospital, RTI, Gulu	40	67				38	84.6	90	67				93	92

- **Monthly coaching visits continued to the three sites in Mityana District.** Site teams were supported to use treatment guidelines and to support fellow staff that was not well acclimated to using treatment guidelines. During the same period, teams were encouraged to sustain changes and address other improvement aims including: documentation, clinic efficiency, and patients' clinical outcomes. As a result of this initiative, the level of completeness and accuracy of medical records, percentage of patients waiting less than 30 minutes between service points, and patients' clinical outcomes improved further. During site visits, exchange visits between sites were done. One or two staff from one site was invited to move with the coaching team to share experiences and learn from the other site. During coaching meetings, teams shared the changes they implemented to achieve their improvement aims.
    - Figure 107 shows improvement in chart completeness in Mityana District. At baseline, only 44% of charts were found to be accurately completed. This has since risen to over 90% and has been sustained at that level since January 2014.

Figure 107: Chronic Care Model: Percentage of complete and correct medical records, Mityana District, Uganda (Jan 2013 – June 2014)

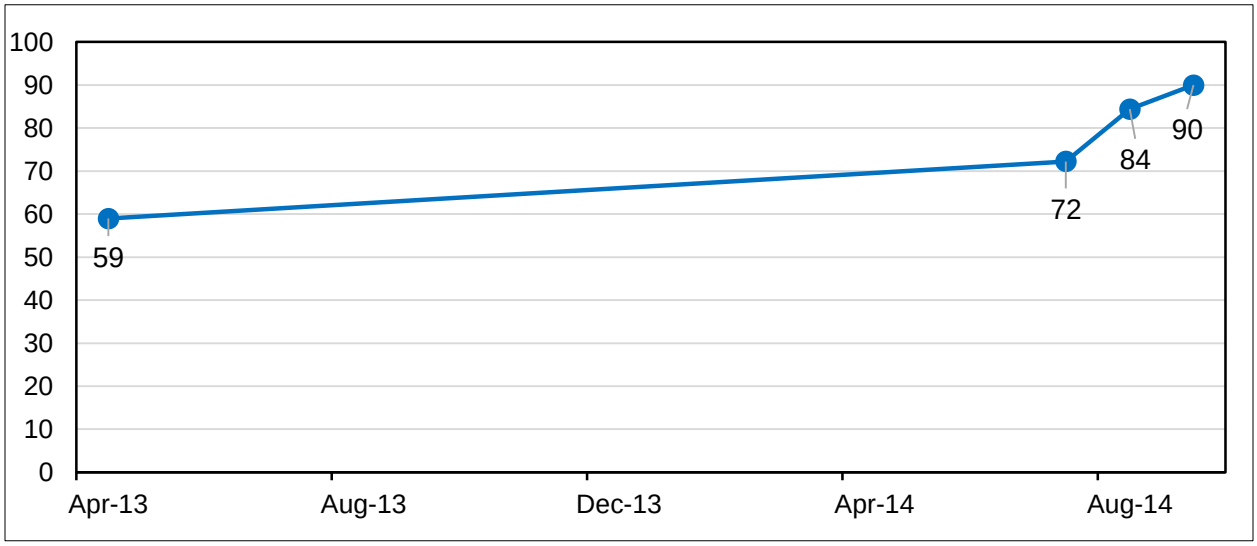


- **Conducted an evaluation to quantify the impact of implementing a chronic care model to improve HIV care in both the intervention and control districts.** From April – June 2014, data were collected through patient interviews and chart reviews in Mityana and Nakaseke districts. Roll-out of activities in Nakaseke was launched using best practices learned from the work in Mityana and Buikwe districts. While this is ongoing in the control district, sites in Mityana have continued to implement activities to ensure they sustain their successes in implementing chronic care and spread that learning to other areas of care.
- **Conducted quality improvement training** (June 2014): Conducted a quality improvement orientation training for three sites from the control district in Nakaseke. Six staff from Mityana, who are chronic care team leaders, participated in this training, three of them as facilitators while the other three were participants but actively involved in discussions. They made a presentation on changes they implemented to improve HIV chronic care at their facilities in Mityana.
    - Key outputs of the training included: Sites from Nakaseke District were able to develop action plans and propose changes to implement in order to improve HIV chronic care; the change package developed from Mityana was shared by participants from Mityana including their experiences in implementing chronic care; and an agreement was reached among

participants from Nakaseke on the need to address gaps identified during baseline and end line evaluations.

- **Conducted coaching session** (June 2014): The ASSIST team conducted the first coaching visit in Nakaseke. Coaches included one ASSIST staff and one staff each from Buikwe and Mityana districts. The purpose for involving coaches from the two districts was for them to share their prior experiences rolling out the change package. An expert patient from each of the sites in Nakaseke participated in the coaching meeting. The objectives of the coaching was to: 1) Facilitate sites in Nakaseke in implementing the action plans that were developed after the quality improvement orientation training; and 2) support sites in Mityana to sustain their improvement work in relation to providing HIV chronic care.
    - Key results from coaching: Each of the facilities decided on improvement projects to focus on in the next action period (July – August 2014), including changes to implement in order to achieve those improvement objectives. From the list of improvement projects, all three sites chose to start by improving the quality of their records and improving clinic efficiency by focusing on reducing client wait times.
- **Addressed human performance factors:** At least one expert patient at each of the facilities in Nakaseke District participated in the quality improvement orientation training and therefore had the opportunity to share and learn from fellow patients from Mityana. At the end of the orientation, the expert patients from Nakaseke were assigned roles in their facilities as it was done in Mityana. These roles such as pre-packing drugs a day before, triaging patients, file retrieval, and patient registration were previously done by health workers in Nakaseke. Coaching at each facility resulted in each facility forming a quality improvement team and each person on the team assigned a role to monitor one improvement objective and update the documentation journal after which s/he would give a report during monthly quality improvement meetings.
- **Conducted monthly coaching visits to Nakaseke** with support from the Nakaseke DHMT and Mityana district improvement coaches which included members of site-level improvement teams and the Mityana DHMT.
- The three new spread sites in Nakaseke showed an increase in the percentage of patients that report at least 95% adherence to ARVs. At baseline when the activity was initially started, adherence was 59% in April 2013. In July 2014, 72% of patients reported that they were at least 95% adherence to ARVs. In September 2014, 90% reported being at least 95% adherent (Figure 108).

Figure 108: Chronic Care Model: Percentage of patients at sites in Nakaseke District, Uganda that report at least 95% adherence (July 2014 – Sept 2014)



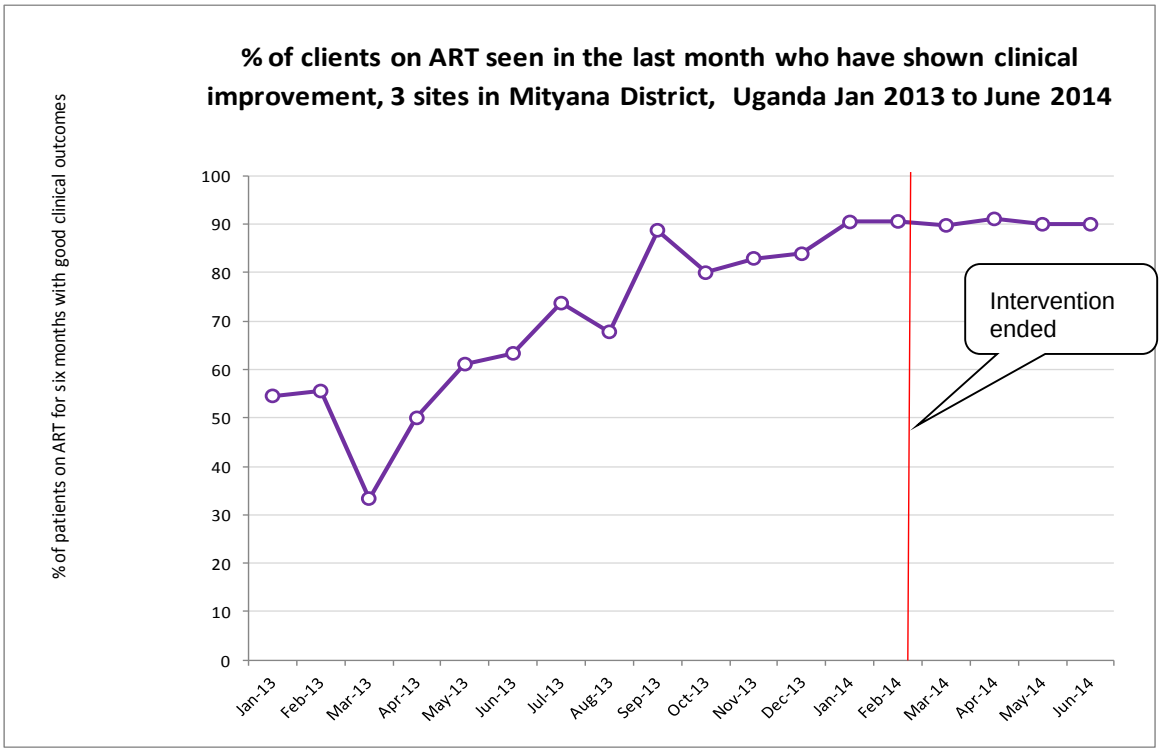
SUSTAINABILITY OF IMPROVEMENTS

Teams in Mityana sites were supported to sustain improvement gains and also spread improvement work beyond HIV chronic care. Despite not supporting these teams since March 2014, they have maintained improvement work and sustained changes that have been implemented. Complete and accurate documentation of care has remained high at greater than 90%, even 3-4 months after coaching stopped. Thepercentage of clients with improved clinical outcomes remained at 90%. One facility, St. Padrepio HC III, has gone on to implement quality improvement in the operating room and maternity departments since April 2014. Staff in these units of the health facility regularly meet to review data and develop changes to address gaps. They were also oriented on use of a documentation journal by the HIV chronic care teams to help them document their improvement work. They have also formed an infection control committee to help identify and address issues related to infection control. Mityana and Nakaseke hospital chronic care teams plan to institute the same changes implemented for HIV chronic care to improve diabetic care at their diabetic clinics.

RESULTS

- **Sustained gains in client outcomes:** Figure 109 highlights that after active coaching ended in February 2014, the sites in Mityana have sustained their results. Figure 109 shows that the percentage of clients seen the previous months with clinical improvement has been stable at 90%.

Figure 109: Chronic Care Model: Percentage of clients on ART who have shown clinical improvement, 3 sites in Mityana District, Uganda (Jan 2013 – June 2014)



- From the preliminary results looking at the ART frameworks for Mityana (the intervention district) and Nakaseke (the control district), we observe that there are differences in population retention as measured by the ratio of those that have picked up their medications of those expected in care. In Mityana, the baseline data showed that in April 2013, 58% of patients that were expected in care were picking up their medications—that there was a retention gap of 42% (Figure 109). In Nakaseke for the same time period, the proportion picking up medications was 44%--a gap of 56% (Figure 110). After intervention, as measured in February 2014, the retention rates were 80% for Mityana (retention gap of 20%) and 48% for Nakaseke (retention gap of 52%). It is

estimated that for the intervention sites there was an overall 38% increase in retention whereas the control sites in Nakaseke demonstrated a 9% increase in retention.

Figure 110: Chronic Care Model: Implementation of ART Framework in Mityana District, Uganda (April 2014 – Feb 2014)

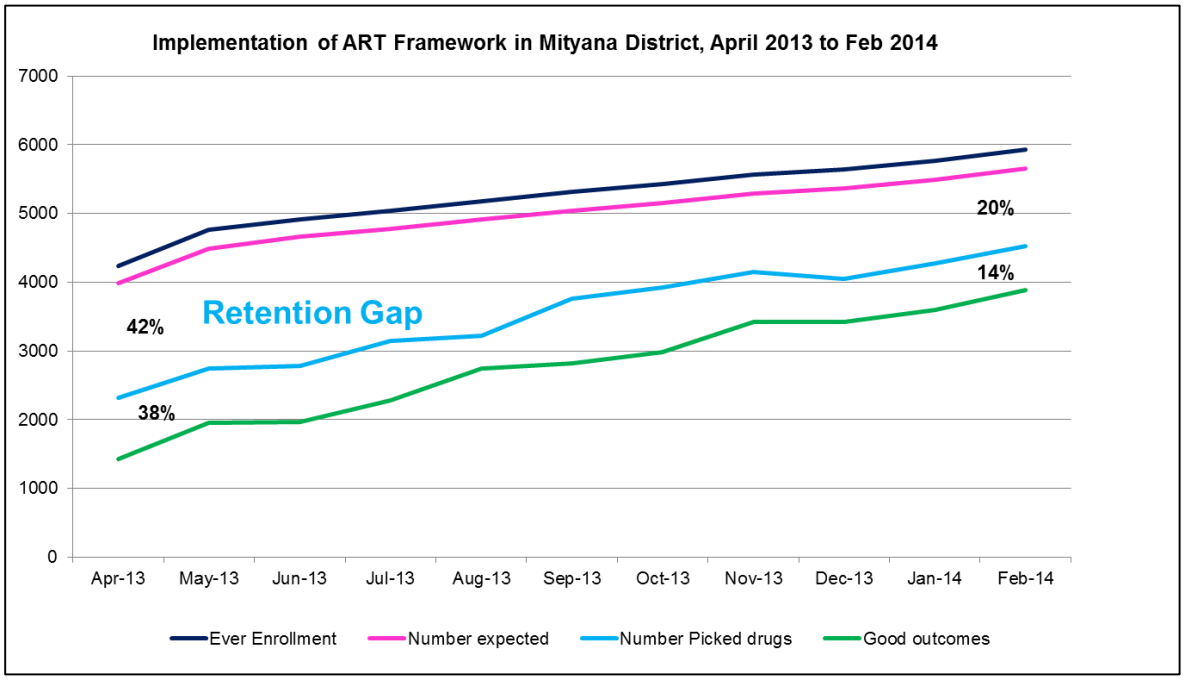
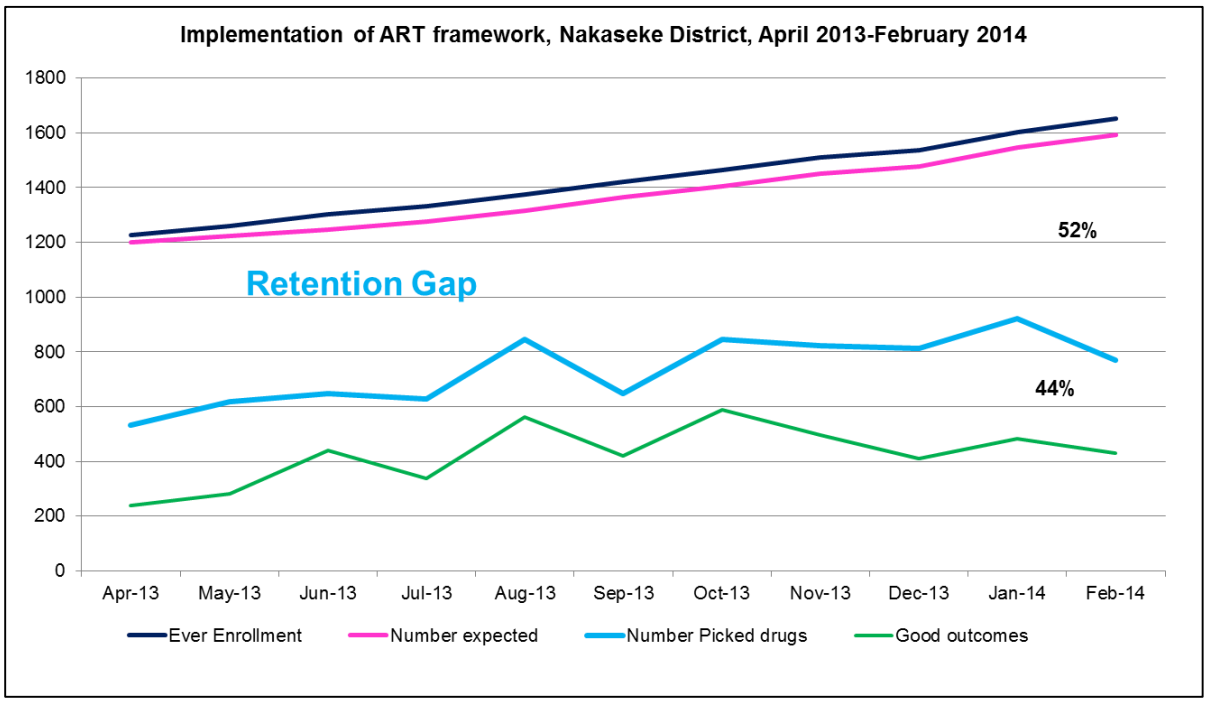


Figure 111: Chronic Care Model: ART Framework for 3 health facilities, Nakaseke District, Uganda (April 2013 – Sept 2014)

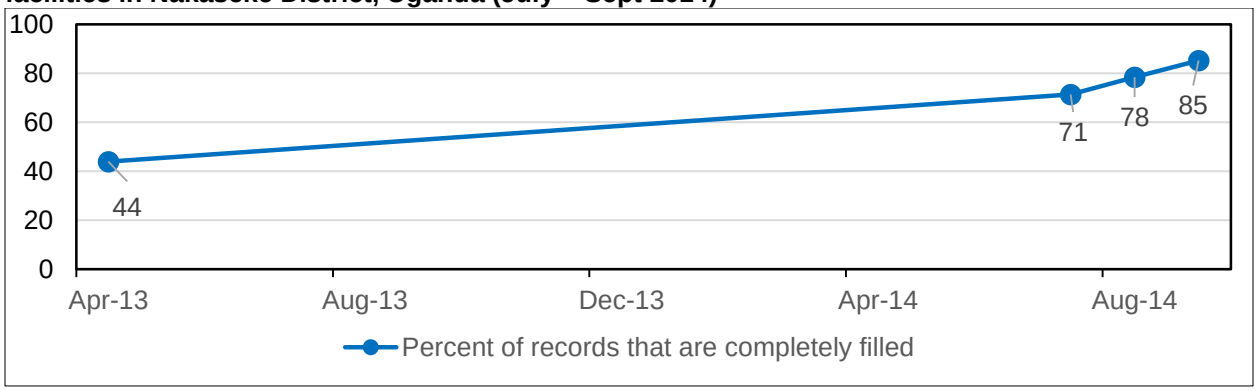


- During FY14, direct support to Mityana District ceased and was begun in Nakaseke District through a step-wedge design. In quarter 3, ASSIST conducted orientation of facility staff and the DHMT in Nakaseke to improvement methods. In quarter 4, monthly coaching visits to Nakaseke

continued were supported by Nakaseke DHMT and Mityana district improvement coaches which included members of both site level improvement teams and the Mityana DHMT.

- The gap between good clinical outcomes relative to those active in care is also decreasing in Nakaseke. When ASSIST began implementing the chronic care activity in Nakaseke District in June 2014, 546 out of 988 patients had good clinical outcomes, compared to 919 out of 1148 patients with good clinical outcomes in September 2014. Retention has remained unchanged at 62% during the three-month intervention at all 3 health facilities in Nakaseke district. As seen in Figure 112, the percent of records completely filled out increased from 71% to 85% in Nakaseke in the July-September 2014 period.

Figure 112: Chronic Care Model: Percentage of records that are completely filled, 3 health care facilities in Nakaseke District, Uganda (July – Sept 2014)



Activity 4. Chronic Care Model Toolkit (including expert patient guidance) - Uganda and Tanzania

KEY ACCOMPLISHMENTS

- In preparation for developing the chronic care model tool kit, the coaching team worked with site teams to put changes in place to ensure detail on how they are tested is recorded (Q1). An additional column in the site level documentation journal and coaching guide was added to record step by step of how changes are implemented. A collaborative level data base with a changes sheet was created so that indicator-specific changes implemented by sites are documented.
- Harvested changes implemented by the intervention sites in Mityana District (Q2).
- Made contributions to developing the expert patient guidance document. The expert patient guidance is under review (Q4).

Activity 5. Injection safety (Swaziland)

KEY ACCOMPLISHMENTS

- **With guidance for the MOH, USAID ASSIST identified intervention sites.** A meeting with the Deputy Director Public Health (MOH), who chairs the project steering committee in MOH and provides policy and strategic advice, suggested that in order to maximize the impact of the intervention we should focus on specific levels: hospital, health centres and Public Health Units (PHUs), leaving out clinics.
- **Conducted training on injection safety and health care waste management (May 19 – 23, 2014):** Nurses and IPC focal persons were the target participants. The main objective of the training was to capacity and knowledge of the injection safety and waste management focal persons on the skills needed to execute the project effectively and improve on quality. During the training, each facility developed an improvement plan and the participant roles in implementing improvement interventions were clearly defined.
- **Held a learning session for facility injection safety and health care waste management (IS&HCWM) focal persons** (July 3, 2014): A total of 17 facilities were represented by IS&HCWM

focal persons. The IS&HCWM focal persons shared their improvement plans and gave updates on progress of the projects. As a result among the 17 facilities, 10 had plans and seven had teams in their health care facilities, while the rest were still working on identifying teams and finalizing their improvement plans.

- **ASSIST facilitated the injection safety and health care waste management core-team meeting (August 20, 2014)**. This team includes the MOH counter parts focal persons for the IS&HCWM project. The following was shared during the meeting: preliminary Injection Safety and Health Care Waste Management Baseline Report results, Injection Safety and Health Care Waste Management Support for facilities plan, Stakeholder Injection Safety and Health Care Waste Management Baseline Report Dissemination Plan; and IEC, BCC material for printing for the project.
- **Conducted monthly coaching and mentoring visits:** Coaching and mentoring visits in collaboration with Ministry of Health injection safety focal person was conducted to monitor and support the quality improvement teams and their projects at facilities. These visits started August and have been ongoing monthly. The health care facility IS&HCWM focal persons were initially prepared for the visits and appointments made. This was done in eleven (11) out of the twenty 20 facilities and these were mainly from two regions (Hhohho and Manzini). Among these 5 facilities were hospitals (2 private, 3 public) and of these hospitals one was a psychiatric center hospital, others were clinics which included 2 primary health clinics, 2 public health unit clinics, one military clinic and one dental clinic.
- **Conducted on site training for nurses and healthcare waste handlers for two facilities** (Medisun Private Hospital and Siphocosini clinic) in September 24, 2014. The training was on injection safety and waste management and the skills needed to effectively improve on quality in injection safety, health care waste management and health care worker safety.
- **Collected data on the key indicators**: Data was collected from 9 of the 11 visited facilities in the quarter. The data showed that the compliance to proper waste management practices was at an average of 52% and health care worker safety compliance at 50% average. PEP starter packs were still only available at only 4 out of the 9 facilities (44% of facilities). PEP starter packs for the facilities have been ordered to ensure that they are available in all 20 facilities. This means that there is still a need to ensure that the tested changes for improvement are actually ideal as the project aims at ensuring that the selected changes by the teams which are being tested can be up scaled at the end.
- **Facilitated and contributed in the project material development and printing:** The printing of the Swaziland National Health care waste management guidelines, health care waste and injection safety posters has been completed and will be distributed to all four regions in the country. These shall be disseminated in the four regions in the country. Finalized the design for the injection safety posters, SOPs and IEC material which are awaiting printing.

INSTITUTIONALIZATION AND SUSTAINABILITY

These activities are achieving institutionalization and sustainability by partnering with both the national and district health authorities throughout the life of the activities. For all the listed above activities, coaching visits were done in conjunction with District health officers or similar designees. For example, with the Injection Safety Activity in Swaziland, ASSIST worked with the MOH in selecting sites for implementation. In Uganda, the ASSIST team supporting SMC improvement activities has supported the MOH to develop M&E tools which are now the tools used at all implementing sites. In regards to sustainability, in Mityana District, even after the team has ceased to provide coaching visits, sites have maintained and sustained improvements. And coaches from Mityana are now part of the coaching team supporting sites in Nakaseke District.

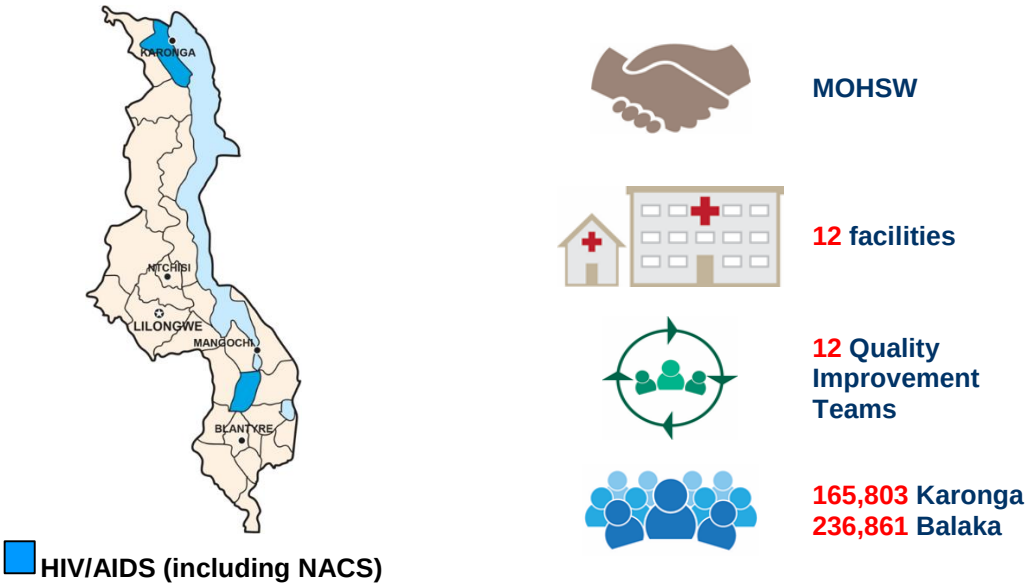
NUTRITION ASSESSMENT, COUNSELING AND SUPPORT (NACS) AND PARTNERSHIP FOR HIV-FREE SURVIVAL (PHFS)

BACKGROUND

Building on HCI's experience in supporting nutrition assessment counselling and support (NACS) services for HIV clients in Uganda, Kenya, and Malawi, USAID ASSIST is supporting clinics and

communities in Zambia and Malawi to improve nutrition care and to strengthen their systems to ensure high quality care is being delivered. USAID ASSIST is also supporting community improvement activities in Mozambique as well as global technical leadership and learning related to reducing HIV transmission to exposed infants under the Partnership for HIV-Free Survival (PHFS) and NACS that draws on experiences funded under HCI since 2011. *(Note: PHFS work in Mozambique and NACS work in Zambia also receive Mission funding and are reported in their respective sections under Field Support-Funded Activities.)*

Scale of USAID ASSIST's NACS Improvement Work in Malawi



PROGRAM OVERVIEW

Activities	What are we trying to accomplish?	At what scale?	Improvement Activity	Activity
1. Nutrition, Counseling, Support and Treatment Program (NCST) in Malawi	• Integrate nutrition services into HIV & TB clinics to improve nutritional status of HIV & TB clients (NACS)	2 districts (Balaka – 8 sites and Karonga – 4 sites). 1 QI team per site. . The project is covering a population of 165,803 in Karonga and 236,861 in Balaka	x	
2. Improvement technical assistance to countries for the Partnership for HIV-Free Survival	• Reduce HIV transmission to exposed infants and reduce infant mortality by ensuring care is provided in line with 2013 WHO PMTCT guidelines	Uganda : 22 sites in 6 districts Tanzania: 30 sites in 3 districts Kenya:17 sites in 4 districts Lesotho:12 sites in 3 districts Mozambique: 95 sites in 8 communities in 3 provinces;7 facilities		x

3. Integrate nutrition services into HIV clinics to improve nutritional status of HIV clients in Zambia	• Improve management and nutritional status of malnourished PLHIV.	8 facilities in Kitwe District, Copperbelt Province.	x	

Activity 1. Nutrition, Counseling, Support and Treatment Program (NCST) in Malawi

ACCOMPLISHMENTS

- **Met with Clinton Health Access Initiative (CHAI)** (December 6, 2013)**.** ASSIST staff met with a representative of CHAI in Malawi to discuss opportunities for CHAI to provide ready-to-use therapeutic foods (RUTF) to the facilities involved in the NACS work. CHAI has included RUTF for adults in these facilities in their budget and is waiting to find out how much they will be able to procure.
- **Conducted learning sessions**
  - From December 11 – 12, 2013 ASSIST conducted the second learning session for Karonga and Balaka QI teams to share progress of their improvement work. During the learning session, the teams shared what they have been learning about improving nutrition assessments, both in terms of successes and challenges, as well as refreshing the teams' skills in improvement, and discussing next steps in NACS in Malawi. Most teams had achieved high levels of assessment (80% and higher). Therefore, during this learning session ASSIST staff asked QI teams to share their current data on default rates (i.e., patients in nutrition programs who have stopped coming for assessments). QI teams discussed improving measurement for default rates and then generated some initial ideas about why defaults occur. The day before the learning session, a coaches' meeting was held to prepare for the learning session, discuss strengths and weaknesses in coaching and brainstorm ways to strengthen it.
  - In April 2014, ASSIST worked with the MOH to conduct a second learning session was held for 8 sites from Karonga and Balaka districts. The purpose of the learning session was to provide a forum for peer to peer learning and sharing of best practices to improve retention of patients in nutrition care. During the learning session, teams shared results and changes they tested to improve retention for nutrition care. The teams also consolidated the effective changes tested to improve assessment and classification to be used for spreading.
  - From September 16-17, 2014, learning sessions were held for four sites in Karonga. During the learning session QI teams shared results accomplished to improve retention of patients in nutrition care, they also developed a new improvement aim to improve linkage of malnourished patients to economic strengthening, livelihood and food security support.

Learning session participants listening to presentation from Nyungwe H/C

A group discussion during a QI learning session

- **Conducted coaching sessions**
  - January and February 2014: Conducted coaching sessions in all eight health facilities and focused on the following objectives:
    - To review with the facility QI teams the improvement objectives developed on reducing defaulters and the indicators they are using to track the improvement aims
    - To review with the teams the changes they have developed and tested to improve retention of patients in nutrition care
    - To support and review data management and reporting with the facility QI teams
    - To follow up on action points agreed during the last coaching sessions
    - To provide support to district coaches in supporting teams of health workers to improve service delivery
  - During the coaching visit ASSIST, the Ministry of Health and the Office of the President's and Cabinet held a meeting with Balaka District QI coaches where a review of the coaches' support to sites and planning for the coaching sessions was done. It was interesting to note that the coaches requested funding from the District Health Management Team (DHMT) which they received and used for coaching sessions in the four sites.
  - In May 2014 a second coaching session was held in the eight sites. The coaching visits were organized to follow up on improvement plans developed during the April 2014 learning session. The visits were also intended to review and support the teams on changes developed and currently being tested. The changes currently being tested are for patient retention in nutritional care and data management. The coaches went through all the changes the teams are testing and they supported the teams on how to use the Plan-Do-Study-Act (PDSA) cycles to test their results. The coaches also supported the teams on how to document the effectiveness of the changes tested.
- **Provided inputs to the Malawi NACS Guidelines currently supported by Food and Nutrition Technical Assistance III Project (FANTA)** (August 2013-June 2014)**.** The Ministry of Health recommended that QI should be incorporated into the Malawi NACS Guidelines. ASSIST has been providing technical guidance for the QI sections during the review process.
- **Worked with other partners to finalize the roadmap for incorporating NACS indicators into HMIS, HIV and TB monitoring and evaluation systems** (July 2013 – May 2014)**.**
- **Advocated for food supplies for malnourished clients identified in the eight sites supported by ASSIST. ASSIST identified and coordinated with CHAI to support eight sites**. In October 2013, ASSIST negotiated with CHAI to support the 8 sites with food supplies for managing the malnourished patients. During this time, CHAI was supporting the Malawi Community Management of Acute Malnutrition (CMAM) program that focuses on children only. CHAI had no plans to support the NACS program. ASSIST shared the results from the eight sites and highlighted the need for food supplies to support the program. ASSIST provided CHAI with projections for food supplies to support the 8 sites for one year. After a month of negotiations, CHAI was convinced of the need to support the 8 sites. In February and March 2014, CHAI began providing RUTF for severely malnourished clients and corn soya blend flour for moderately malnourished clients.
- **To understand why clients are missing appointments for NCST care, the sites conducted a survey** (December 2013 - January 2014)**.** The results from the survey in all eight sites are shown in Figure 113. The improvement teams are now testing changes targeted at the top three reasons for missing appointments.
- **Participated in assessment of the capacity and competencies of service providers in NCST** (May 2014). ASSIST joined FANTA in Balaka District where they assessed the competencies of service providers on NCST. Preliminary results shared by FANTA indicate that there is a wide knowledge gap and competencies on NCST; however, the sites have enough service providers to deliver NCST services. ASSIST also learned that two of the four new sites are using the quality improvement to improve hospital deliveries. ASSIST and the MOH intend to support the already existing quality improvement teams to improve nutrition care.
- **Developed the quality improvement component of the Malawi NCST training package.** The

materials include a facilitator's guide, participant's guide and a participant's workbook. These will be part of the Malawi NCST training package for national use. The materials were field tested during the NCST training in Balaka District. Comments were consolidated and the training material will be updated based on the comments and observations.

- **Conducted training of service providers** (June 2014). ASSIST with FANTA jointly supported the MOH to conduct the NCST training of service providers in four new sites in Balaka District. The purpose of the training was to build knowledge and equip the service providers with skills to apply quality improvement methods and techniques to integrate nutrition care, and improve nutrition services in HIV and TB care. Thirty one service providers from Namdumbo, Mbela, Utale 2 and Phalula Health Centers attended the training. The participants were trained on quality improvement principles, the quality improvement model and how to apply the quality improvement model to integrate NCST services in their existing service delivery system. The participants then developed a three-month quality improvement implementation plan for their sites.
- **Nutrition assessment and categorization:** In Q4, QI teams continued to sustain improvement in nutrition assessment as 99% of patient are assessed every month and more than 400 malnourished patients identified and put on care every month. Four new QI teams used new effective changes compiled by the initial eight sites to improve assessment and categorization and they were able to improve services within the last three months, from 2% in June to 96% in September, 2014 (Figure 115).

RESULTS

Improvement in Key Indicators

Activity	Indicators	Baseline	Last value
Nutrition, Counseling, Support and Treatment Program (NCST) in Malawi	% of clients assessed and categorized for malnutrition using mid-upper arm circumference (MUAC) and BMI	2% (January 2013) 7 sites	99% (August 2014) 7 sites
	% of patients who default	37% (November 2013) 8 sites	3% (August 2014) 8 sites
	% of patients who recovered from malnutrition	3% (May 2013) 8 sites	59% (August 2014) 8 sites

- **Improved retention of patients in nutrition care.** Results show that the percentage of defaulters in 8 sites reduced from an average of 51% in 2013 to an average of 3% by April 2014 (Figure 113). The percentage of patients returning for NCST appointments has increased in Balaka District Hospital since January 2014 (Figure 114).

Figure 113: NACS: Percentage of patients defaulting from NCST care, Karonga and Balaka districts, Malawi (Nov 2013 – Aug 2014)

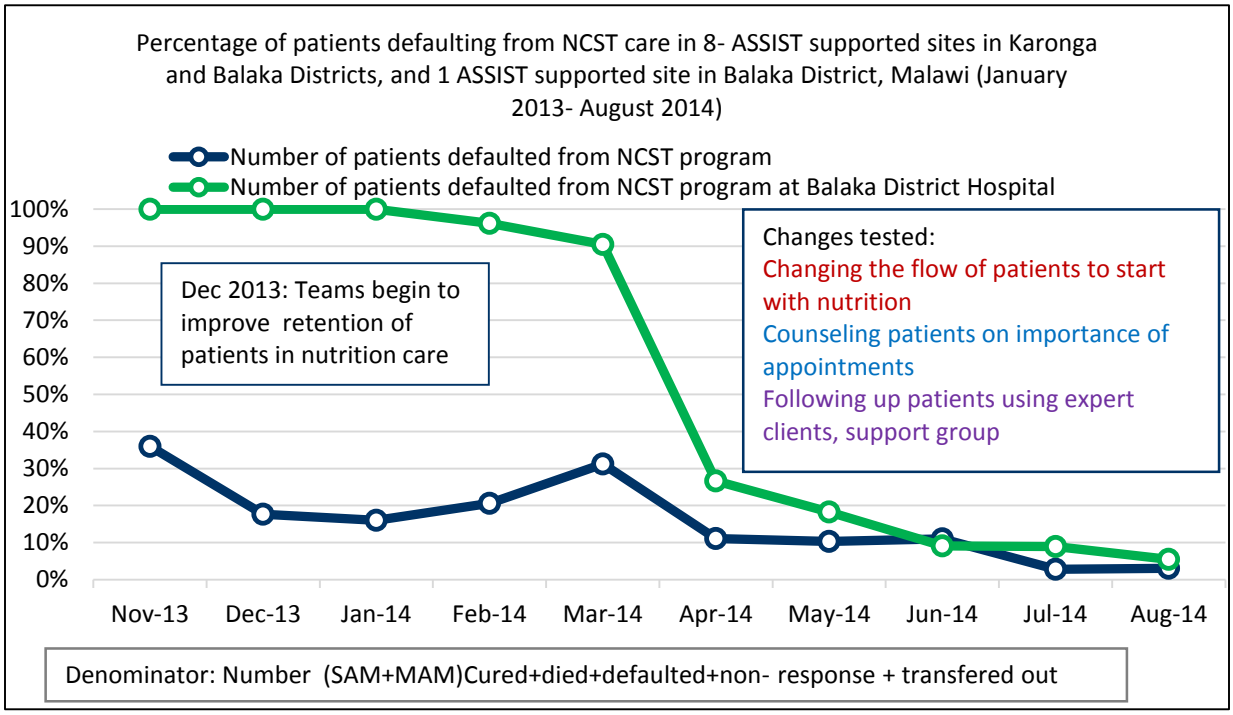
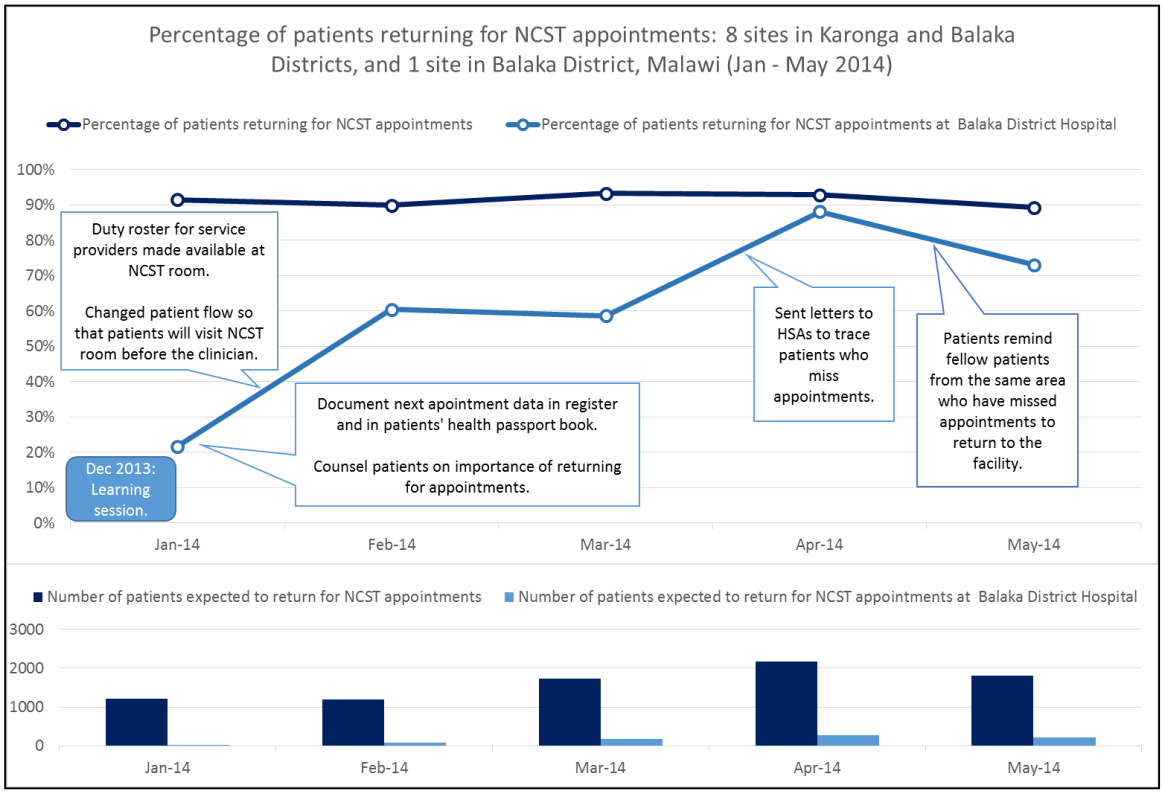
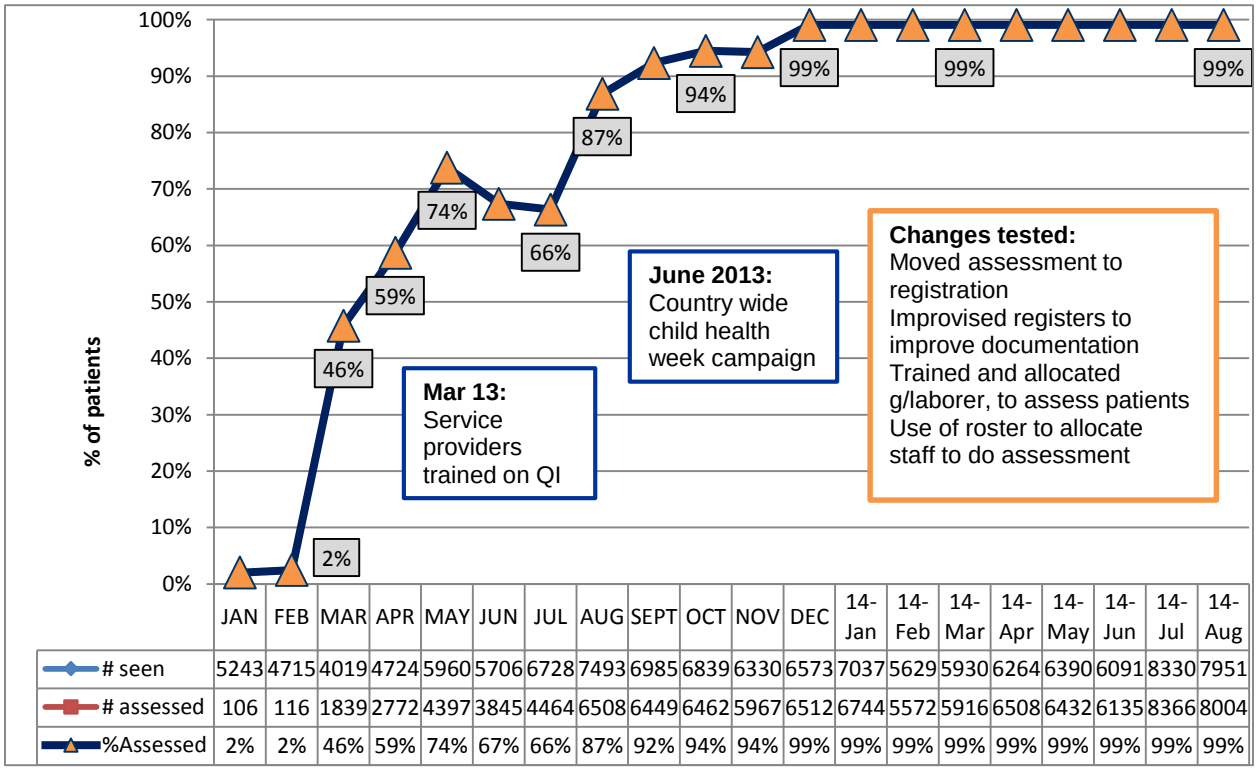


Figure 114: NACS: Percentage of patients returning for NCST appointments, Karonga and Balaka districts, Malawi (Jan – May 2014)



- **Increased percentage of patients assessed and categorized for malnutrition.** In January 2013, only (106) 2% of clients coming to the clinics were being assessed for malnutrition in seven of the eight sites. The eighth site was already assessing 100% of clients. After incorporating the changes to improve nutrition service delivery, those seven facilities are now assessing nearly 100% of people coming to the clinics, as shown in Figure 115.

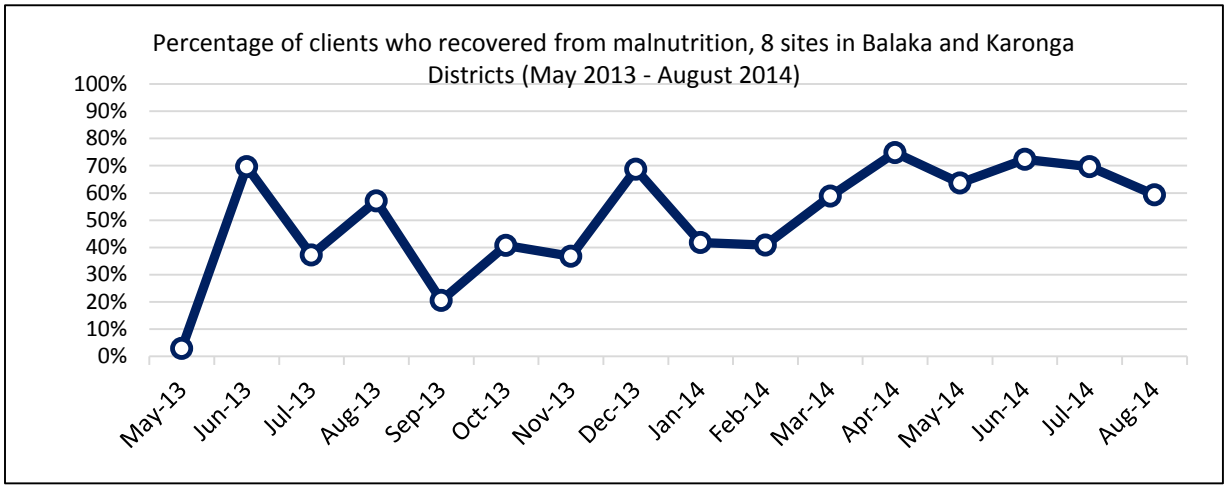
Figure 115: NACS: Percentage of patients assessed and categorized for malnutrition at at 7 sites in Karonga and Balaka districts, Malawi (Jan 2013 – Aug 2014)



	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEPT	OCT	NOV	DEC	14-Jan	14-Feb	14-Mar	14-Apr	14-May	14-Jun	14-Jul	14-Aug
# seen	5243	4715	4019	4724	5960	5706	6728	7493	6985	6839	6330	6573	7037	5629	5930	6264	6390	6091	8330	7951
# assessed	106	116	1839	2772	4397	3845	4464	6508	6449	6462	5967	6512	6744	5572	5916	6508	6432	6135	8366	8004
%Assessed	2%	2%	46%	59%	74%	67%	66%	87%	92%	94%	94%	99%	99%	99%	99%	99%	99%	99%	99%	99%

- **Retention of malnourished patients in nutrition care:** The eight QI teams have significantly improved retention such that more patients are recovering from malnutrition than defaulting (Figure 116).
- **Improved percentage of clients who recovered from malnutrition**. Figure 115 shows progress in the percentage of clients who have recovered from malnutrition at the 8 sites in Balaka and Karonga districts. Patients are considered to have recovered from malnutrition if they attain a BMI of 18.5 or higher, do not have bilateral oedema, or have a MUAC of 23cm or more (for pregnant or lactating patients whose BMI cannot be accurately measured).

Figure 116: NACS: Percentage of clients who recovered from malnutrition, 8 sites in Balaka and Karonga districts, Malawi (May 2014 – August 2014)



Denominator: Number (SAM+MAM)Cured+died+defaulted+non-response + transfered out

Activity 2: Improvement technical assistance to countries for the Partnership for HIV-Free Survival

ACCOMPLISHMENTS

- **On October 29th, the ASSIST PHFS teams from Kenya, Tanzania and Uganda met for a regional PHFS meeting in Uganda to share progress and learning.**
- **Participated in monthly PHFS calls** (Q1-2)**.**
- **Mozambique**
  - ASSIST Senior Advisor for Community travelled to three communities and identified community structures.
  - Hired Improvement Advisor.
  - Worked closely with global partners, implementing partners and community-based organizations.
- **Lesotho**
  - Since the November 2013 learning session, ASSIST staff travelled with Lesotho MOH PHFS/NACS Coordinator to all three districts to check on facility progress and coached facility and district staff on current performance and next steps.
  - Collected baseline performance data.
  - Hired, introduced and oriented new Chief of Party to PHFS work.
- **Uganda:** Conducted a February 2014 harvest meeting in Uganda. After this the team identified and documented the package of interventions that resulted in improvement for three areas:
  - Retaining mothers and babies in care: From 2.2% at baseline to 60.8% in March 2014.
  - Data quality: From 2.9% in April 2013 to 95.1% in February 2014.
  - Services for mother-baby pair routine visits: From 2.9% in June 2013 to 98.4% in February 2014.
- **Tanzania**: Tanzania held a PHFS National learning platform in March 2014.

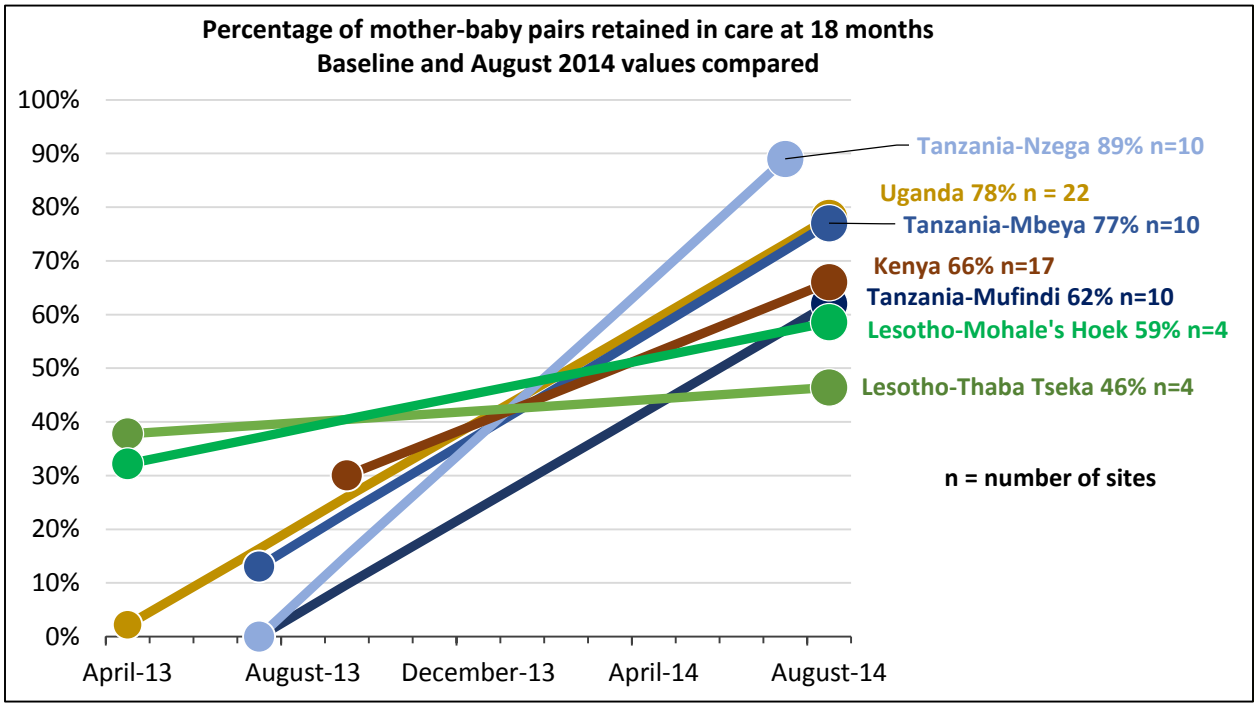
RESULTS:

Improvements in Key Indicators

Activity	Indicators	Baseline	Last value
Quality Improvement technical assistance to countries for the Partnership for HIV-Free Survival	% of HIV positive mother-baby pairs retained into care at 18 months.	Uganda: 2% (April 2013) 22 sites in 6 districts	78% (August 2014)
		Tanzania (July 2013) Mbeya 13% Mufindi 0% Nzega 0% 10 sites each in 3 districts (30 total)	Mbeya 77% (August 2014) Mufindi 62% (August 2014) Nzega 89% (July 2014)
		Kenya (September 2013) 30% 17 sites in 4 districts	66% (August 2014)
		Lesotho (March 2013) Thaba Tseka 37% Mohale's Hoek 31% 4 sites each in 2 districts (8 total)	August 2014 Thaba Tseka 46% Mohale's Hoek 59%

- **All five PHFS countries are making progress on their areas of focus for improvement** (Figure 117).

Figure 117: PHFS: Percentage of mother-baby pairs retained into care at 18 months, 5 ASSIST PHFS countries (April 2013-May 2014)*



**Note: Kenya uses a population estimate for the denominator whereas the other countries are counting the actual number of exposed infants expected in care.*

Activity 3. Integrate nutrition services into HIV clinics to improve nutritional status of HIV clients in Zambia

ACCOMPLISHMENTS:

- ASSIST's Regional Director for southern Africa and Senior Improvement Advisor from Bethesda traveled to Lusaka in March 2014 to meet with Dr. Abeje Zegeye in the Mission, travel to Kitwe with FANTA staff to meet with the District Health staff and visit sites that ASSIST will be supporting. ASSIST staff accomplished several trip objectives including hiring part-time finance and administrative staff, meeting implementing partner staff, and hiring the ASSIST Resident Advisor for Zambia, Mr. Robert Musopole (May 2014).
- ASSIST's Senior Improvement Advisor and Improvement Specialist from Bethesda traveled to Kitwe and Lusaka (June 2014). ASSIST staff met with relevant stakeholders in Copperbelt Provinces and the QI Officer for the MOH in Lusaka, Ms. Racheal Lungwebungu. They also supported Mr. Musopole to develop the QI training course for site time and plan for the first learning session, which took plan the week of July 28, 2014.
- NACS Improvement Specialist from Bethesda and Nutrition Advisor from Lilongwe, Malawi traveled to Kitwe in July and August 2014. They supported NACS district coaches in Kitwe to conduct coaching visits to the eight NACS sites in Kitwe District and helped conduct the first two-day learning session with representatives from all eight sites and one district coach.

SUSTAINING/INSTITUTIONALIZING IMPROVEMENT

The starting point for the QI model is for the teams to define the problems in their work and brainstorm solutions which would improve services for patients. The QI model by design, creates conditions for sustainability in such a way that the teams are able to review the evidence and sustainability of the changes they have tested in order for them to decide whether to adopt the change into their system. The role of the MoH national and district coaches in each country will be to continuously provide support to facility teams. ASSIST builds the capacity of these coaches to be able to plan and conduct coaching visits to support the teams using the available government resources.

VULNERABLE CHILDREN AND FAMILIES

BACKGROUND

Building on the work of a regional initiative to improve the quality of orphans and vulnerable children programming known as "Care than Counts," started under HCI in 2007, in FY14, the USAID ASSIST Project continued enhancement of the technical and organizational capacity of the Regional Psychosocial Support Initiative (REPPSI) and the African Network for the Protection and Prevention of Child Abuse and Neglect (ANPPCAN) to provide a quality improvement approach to child protection services in Tanzania, Uganda, Swaziland, and Kenya.

In December 2013, ASSIST organized and conducted a meeting of Africa-based and international experts in the field of child-caregiver relationships to explore the parenting programs already existing in Africa and the successful components and common elements of those programs. Hosting the meeting in South Africa allowed for enhanced participation among Africa-based practitioners who are already implementing parenting programs, and for PEPFAR and USAID to help inform evidence among African and other non-Western models about skilful parenting. A report of the meeting was prepared.

PROGRAM OVERVIEW

Activities	What are we trying to accomplish?	At what scale?	Improvement Activity	Activity
1. Partnerships for Community Child Protection	• Provide technical support to ministry and partners to use QI approaches to improve quality of child protection mechanisms at the local level	2 communities x 2 districts x 4 countries – Tanzania, Uganda, Swaziland, and Kenya		x
	• Build the technical and organizational capacity of REPPSI and ANPPCAN to provide a quality improvement approach to child protection services	REPSSI operates in 13 Sub-Saharan countries, ANPPCAN in 22		
2. Africa Parenting Meeting	• Organize and conduct a meeting of Africa-based and international experts in the field of child-caregiver relationships to explore parenting programs that already exist in Africa and their successful/common elements components	75/25 split between Africa-based and internationally-based attendees		x

Activity 1. Partnerships for Community Child Protection

KEY ACCOMPLISHMENTS

- **REPPSI and ANPPCAN held meetings with district leadership, including children's officers, in two districts per each of the four countries, to plan the community conversations in two communities per district** (Q1)**.** The target districts included Gulu and Mukono Districts in Uganda, Embakasi and Dagoretti Districts in Kenya, Muleba and Magu in Tanzania, and Manzini and Hhohho in Swaziland.
- **REPSSI developed a module focused on Community Safety in its Journey of Life series.** The tool was used to elicit information from community members in the community conversations conducted in 16 sites in Uganda, Tanzania, Kenya and Swaziland (Q1).
- **REPPSI and ANPPCAN held community conversations in two communities per district** (Q1). Information on child protection issues facing children in the communities was gathered from children, teachers, traditional leaders, and caregivers using a Safe Communities tool developed by REPSSI. Community members developed action plans to improve the community situations, including suggesting ways of measuring the changes desired.
- **REPSSI and ANPPCAN, with technical support from ASSIST, held second sessions with the leadership in two Districts in each country to present a model of improvement that could be used to address issues the community raised** (Q1).
- **REPSSI and ANPPCAN conducted a final national meeting in Uganda, Kenya, Swaziland, and Tanzania to share findings from the communities and districts** (Q2).
- **ASSIST held a teleconference from USAID and included representatives from REPSSI and ANPPCAN.** This was an opportunity to provide a report of activities that had been conducted under the partnership. All reports of activities are accessible through Dropbox.
- **Lessons learned from this project over the past 1 ½ years include:**
    - Governments at the national, district and local levels in all 4 countries took a lead role in planning and follow up on issues and demonstrated successful coordination at stakeholders.
    - Local government adopted effective strategies for partnering with community
    - Focusing on sharing across levels of the system can be effective in integrating informal and formal mechanisms of protection
    - Multi-sectoral approach and engagement of key players in the TWGs shows concerted effort in child protection

- Communities demonstrated their capacity to analyze and address certain child protection concerns and challenges at the local level (work plans developed, roles)
- Lessons from community conversations brought home the need to hear the voices of children, parents, teachers, community members, and local government, and to engage them all in a meaningful manner before designing or implementing interventions
- Involvement of chiefs and traditional leaders is critical to success
- Issues of gender, culture and context are essential to effective protection systems
- Activities that are not project driven, nor create parallel structures but rather build on existing government and community structures, contribute to ownership and sustainability
- QI tools are useful at the community and district level for analyzing and changing processes
- Stakeholders reported natural spread of the approach across districts

- **REPSSI, ANPPCAN, ASSIST and government partners conducted a round table presentation of the project to the Regional PSS Forum in Nairobi** (October 30, 2013). The presentation was facilitated by Lynette Mudekunye, REPSSI. Cornel Ogutu of ANPPCAN gave an overview of the project. James Kabogozza Commissioner for Children affairs Ministry of Gender, Labour and Social Development, Uganda and Jeanne Ndyetabura Assistant Commissioner Department of Social Welfare , Tanzania spoke of governments' hopes from this project. Wambui Njuguna of ANPPCAN spoke of the difference between this approach and others to strengthening Child Protection systems. Diana Chamrad, HCI, outlined the Quality Improvement approach. Peter Massesa, REPSSI, gave an overview of the Journey of Life approach and Mandla Mazibuko, REPSSI, spoke of some of the issues that are coming up in the community conversations.
- **Building capacity of REPSSI and ANPPCAN has been a key objective of the Partnerships Project. In October 2013, ASSIST provided a capacity building workshop for REPSSI and ANPPCAN entitled "Capacity to Sustainability" that was facilitated by Encompass' global network**. Ten participants from REPSSI and nine from ANPPCAN attended the workshop in Nairobi, Kenya. The workshop was based on an appreciative framework using adult learning principles and participants' interactions to learn and assimilate new ideas and behaviors. A primary focus was on self-awareness as a starting pointing to building management skills. Interactive exercises and effective tools were used to further increase self-awareness and awareness of others.
- **To build further capacity in improvement design, two representatives from both REPSSI and ANPPCAN attended the Aims, Indicators and Content meeting held in Dar es Salaam, June 30-July 3, 2014.** They also added expertise on child protection and psychosocial care to the meeting.
  - Following the meeting, ASSIST met with REPSSI and ANPPCAN to develop a SOW for moving forward with activities under Partnerships for Community Child Protection (July 4-5, 2014). Following on the previous few days of focusing on improvement design, we discussed areas that we might want to develop improvement aims. A topic of common interest is physical abuse in the schools.
- **In September 2014, a meeting was held in Kampala with REPSSI and ANPPCAN to plan further activities of the Partnerships in Community Child Protection.** Uganda will be the first country to intensively train the partners and implement an improvement activity on child protection issues in four communities in Uganda. ASSIST/Uganda will lead the capacity building of REPSSI and ANPPCAN using a "See One, Do One, and Teach One" approach. After piloting the building of capacity in Uganda, the model will be extended to Kenya, Tanzania and Swaziland, funding permitting.
- The proposed SOW for the Partnership includes the following activities:
  - Planning meetings between REPSSI, ANPPCAN and ASSIST Uganda and ASSIST headquarters
  - Development of Aims, Indicators and Content document
  - Updated training of REPSSI and ANPPCAN on QI

- Training REPSSI and ANPPCAN on coaching and knowledge sharing
- Testing of indicators in community
- Training of community teams, led by ASSIST then REPSSI and ANPPCAN
- Coaching visits to four communities on monthly basis
- Final harvest meeting
- Development of change package
- Documentation of improvement in four communities

Activity 2. Africa Parenting Meeting

KEY ACCOMPLISHMENTS

- **Attended the Parenting in Africa meeting in Mangochi, Malawi, to begin networking with organizations conducting activities centered on parenting skills (October 2013).**
- **USAID ASSIST organized and conducted a meeting of Africa-based and international experts in the field of child-caregiver relationships to explore parenting programs that already exist in Africa and their successful/common elements components** (Dec 11-13, 2013 in Cape Town, South Africa). This meeting was designed as an opportunity to convene PEPFAR Orphans and Vulnerable Children (OVC) Focal Points, international experts, and practitioners around how PEPFAR programs currently support activities to strengthen child-caregiver relationships and how these efforts might be expanded and improved to better address the multi-dimensional needs of vulnerable children and their families. Thirty-five experts from nine countries attended, including PEPFAR staff, local and international organizations, government staff, and ASSIST. To gather specific recommendations to address gaps in research, policy and programming around the issue of parenting, we used knowledge cafes and speed consulting. Hosting the meeting in South Africa allowed for enhanced participation among Africa-based practitioners who are already implementing parenting programs, and for PEPFAR and USAID to help inform evidence among African and other non-Western models about skilful parenting.
- **ASSIST held a meeting with the USAID TWG to discuss findings from the Cape Town meeting and recommendations for moving forward** (Q2)**.** It was noted that a great deal is already happening around this topic in Africa, in USAID and non-USAID projects. There was interest in how to integrate parenting strategies in other technical areas such as microfinance.
- **The meeting report was finalized and emailed to participants.** The report is posted on the ASSIST website.

SUSTAINABILITY AND INSTITUTIONALIZATION

The Partnerships in Community Child Protection generated significant interest and investment from governments and communities in the four countries. We saw evidence of government cost share for activities. In Swaziland, the government contributed financial support to increase the scope of the regional meetings. In Kenya, we've learned that the national government has made investments in improving the problem of gangs in the communities, an issue brought to the fore as critical through the community conversations. As a result of PCCP and ANPPCAN's ongoing efforts in Nairobi slum districts, there is ongoing cross-talk between districts that are adjacent to one another. ANPPCAN has stated that experiences in PCCP has changed the way they conduct their work and have submitted a proposal to extend a QI approach to proposals they're writing, including one on child labor.

The Partnerships created between REPSSI and ANPPCAN are continuing. They have bid on proposals together, co-hosted the Forum in October 2013, and serve on various child protection committees together. They have cross-trained on tools developed by the other organization. ANPPCAN has submitted work plans that contain a QI component. Both organizations are enthusiastic about continued trainings and are contributing their own resources to continue collaboration in QI. Because their continuation in this area is contingent on provision of technical assistance and funding to conduct improvement activities, funding sources are an ever-pressing issue.

3 Cross Bureau-Funded Activities

FAMILY PLANNING/REPRODUCTIVE HEALTH

BACKGROUND

USAID ASSIST supports USAID Ending Preventable Child and Maternal Deaths (EPCMD) goals by strengthening essential system functions and improving quality and safety of family planning (FP) services to reduce unmet need for FP and achieve Healthy Timing and Spacing of Pregnancy (HTSP). In Niger, ASSIST is working in close collaboration with the Niger Ministry of Health (MOH), managers and front-line providers to promote Healthy Timing and Spacing of Pregnancy (HTSP) via improved integration of FP counseling and services into routine public and private sector MNCH services in two urban Niamey districts and one rural Birnin Konni district. In addition, ASSIST is using cross-bureau family planning funds to study implementation approaches for optimal use of the WHO Safe Childbirth Checklist (SCC) in a small sample of maternities in Mali and Senegal as part of the global WHO SCC Collaboration with a strong focus on the post-partum FP component of the checklist. Earlier versions of the SCC checklist were developed and field-tested by HCI and partners. This work will contribute to greater understanding of the use of checklists to improve integrated FP/MNH service delivery in low and middle income countries (LMICs). ASSIST is integrating a strong focus on client-centered FP services to improve client choice of FP method and adherence with selected methods to achieve healthy timing and spacing of pregnancies and reduced maternal and child mortality.

Scale of USAID ASSIST's Family Planning Improvement Work in Niger

MOPH

16 facilities

16 Quality Improvement Teams

239,255 (25%) out of 971,115

PROGRAM OVERVIEW

Activities	What are we trying to accomplish?	At what scale?	Improvement Activity	Activity
1. Postpartum Family Planning: Niger	• Achieve better health and social outcomes for women of reproductive age and their children and families by improving quality of people-centered integrated post-	3 districts: 2 districts in Niamey City (urban): District III and District IV; 1 district in Tahoua region: Birnin Konni (rural) 16 facilities (out of 20 facilities total): 2	x	

Activities	What are we trying to accomplish?	At what scale?	Improvement Activity	Activity
	partum FP services to reduce unmet FP need and achieve Healthy Timing and Spacing of Pregnancy (HTSP)	hospitals, 2 private primary care centers and 12 public primary care centers: District III: 3 (out of 3 total) primary care centers, 1 (out of 1) regional hospitals District IV: 4 (out of 4) primary care centers Konni District: 7 (out of 13) primary care centers and 1 (out of 1) district hospital QI teams:16 Coverage: 239,255 (25%) out of 971,115		
2. Postpartum FP as part of WHO Safe Childbirth Checklist implementation activity: Senegal	• Test and study implementation approaches to support optimal use of the WHO SCC in a small sample of maternities in Senegal **also implementing SCC MNH/FP improvement work in Mali with Mali Mission funding (see Mali QRM report)*	*Sites being finalized with MOH and USAID/Senegal Mission:* will probably include five MOH maternities in 2 districts in the Dakar vicinity.		x
3. Family Planning Quality Framework	• Framework to support application of improvement approaches to achieve people-centered integrated FP/MNCH service delivery in support of HTSP for better outcomes for women and families • Dissemination of application of improvement approaches to improve quality of FP services	Global		x

Activity 1. Postpartum Family Planning: Niger

KEY ACCOMPLISHMENTS

- **Finalized baseline assessment and data analysis**: Data was collected from 28 primary and secondary health facilities in one rural (Konni) and one urban (Niamey II) district. Interviews were conducted with 28 facility managers; 292 health provider-client FP service delivery interactions were observed and 283 client exit interviews were conducted (Q1).
- **MOH managers supported by ASSIST Niger team provided monthly coaching to facility improvement teams in the 16 maternities in 3 districts** (2 urban districts in Niamey City and 1 rural district in Birnin Konni district in Tahoua region) (Q1).
    - MOH coaches were supported by Niger ASSIST staff to: 1) Build improvement team capacity to test and adopt changes to post-partum care processes to improve PPFP counseling and services; 2) Disseminate learning across facilities through a combination of coaching and

learning sessions; 3) To strengthen local data collection systems and build improvement team skills to calculate and analyze indicators in support of improvement work.

- **Niger team and the MNCH/FP technical leadership team revised improvement aims and indicators for the next phase of the improvement work.** Key revisions included the addition of a safety FP indicator and addition of people-centered aims and indicators connected to cross-cutting ASSIST people-centered principles. MOH coaches in the three districts participating in the Niger PPFP work are being oriented to the updated improvement aims and supporting tools are being finalized to support the next stage of the improvement work (see Table 15 below).
- **The ASSIST Niger team and FP technical unit team developed the tools to support a strong focus on client-centeredness and safety of PPFP services as part of next phase of improvement work** (see improvement aims). Chart audit, provider observation and client questionnaire tools were developed to allow regular measurement of PPFP safety and people-centered process indicators – a key innovation of the next phase of the PPFP work in Niger (Q4).

Table 15: Goal and improvement aims of USAID ASSIST FP work in West Africa

Improvement Goal: Achieve better health outcomes for women, children, and families by promoting Healthy Timing and Spacing of Pregnancy (HTSP) with a focus on reducing unmet need for FP services during the early and extended post-partum period via integrated delivery of FP and MNCH services
Improvement Aim 1: Achieve HTSP for women of reproductive age by improving integration of mixed methods FP counseling and services into routine maternal and newborn early post-partum health care services (including long-acting methods)
Improvement Aim 2: Achieve HTSP by improving integration of mixed methods FP counseling and services into routine (and possibly non-routine) infancy and early childhood health visits (e.g. immunization, well-child visits, possibly sick-child contacts)
Improvement Aim 3: Decrease lost to-follow-up of women using short-acting methods, and reduce requested reversal of long-acting methods, by improving FP counseling, screening, and follow-up of FP users (via facility-, community- and mHealth platforms)
Improvement Aim 4: Strengthen routine FP information systems to support continuous improvement of integrated FP/MNCH services, including development of simple FP uptake, retention and service quality indicators that can be integrated into routine HMIS to track and inform continuous improvement of post-partum FP services

RESULTS

- **Baseline assessment results demonstrated important gaps in quality for post-partum FP counseling, FP method provision, use of Long-acting Reversible Contraceptives (LARCS), integration of FP services into key MNCH services, supply management, provider competency and supervision** (Q1).
  - As shown in Figure 118, the percent of facilities reporting integration of FP services into MNCH services was less than 30% at all points of service delivery, including only 15% during the postnatal visit.
  - The proportion of women who knew the risks associated with closely spaced pregnancies was slightly higher in the Niamey II district than the Konni district. Less than 50% of women knew that infant and maternal deaths were associated with closely spaced pregnancies and that preterm birth could result. Risk of obstetric complications was the most widely known risk, at about 70% and 50% respectively (see Figure 119).
  - Observations of FP counselling sessions demonstrated that providers questioned women about their knowledge of contraceptive methods in less than 20% of counselling sessions in all districts (see Figure 120)
  - The baseline also highlighted a lack of community interventions targeted towards male partner and husbands.

Figure 118: Family Planning: Percentage of facilities reporting integrating FP into MNCH Services, Niger (Baseline 2013)

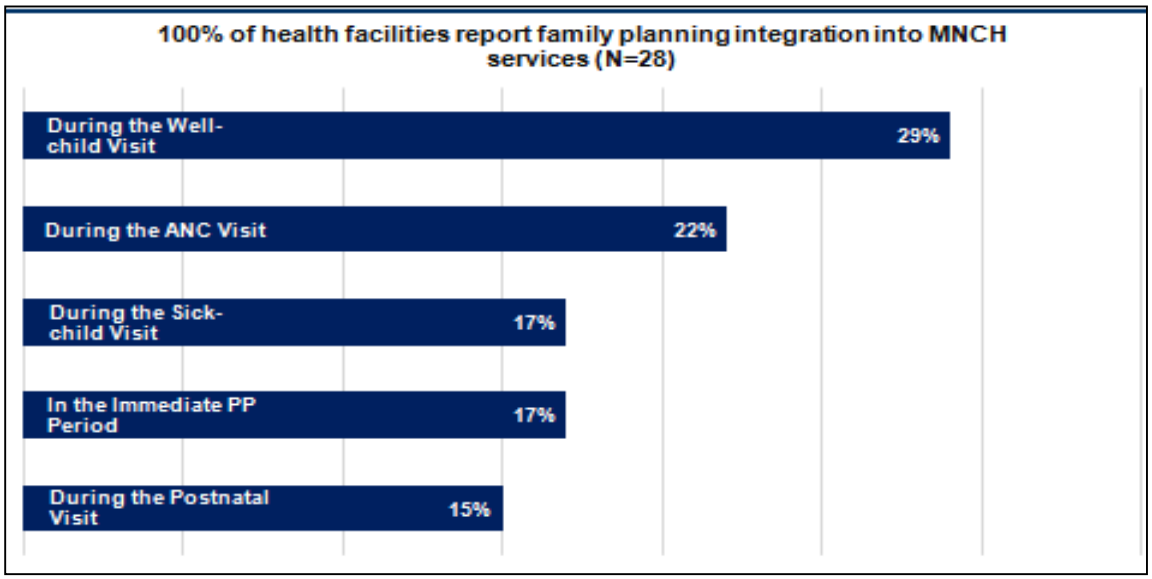


Figure 119: Family Planning: Client knowledge of risks linked to closely-spaced pregnancies, Niger (Baseline 2013)

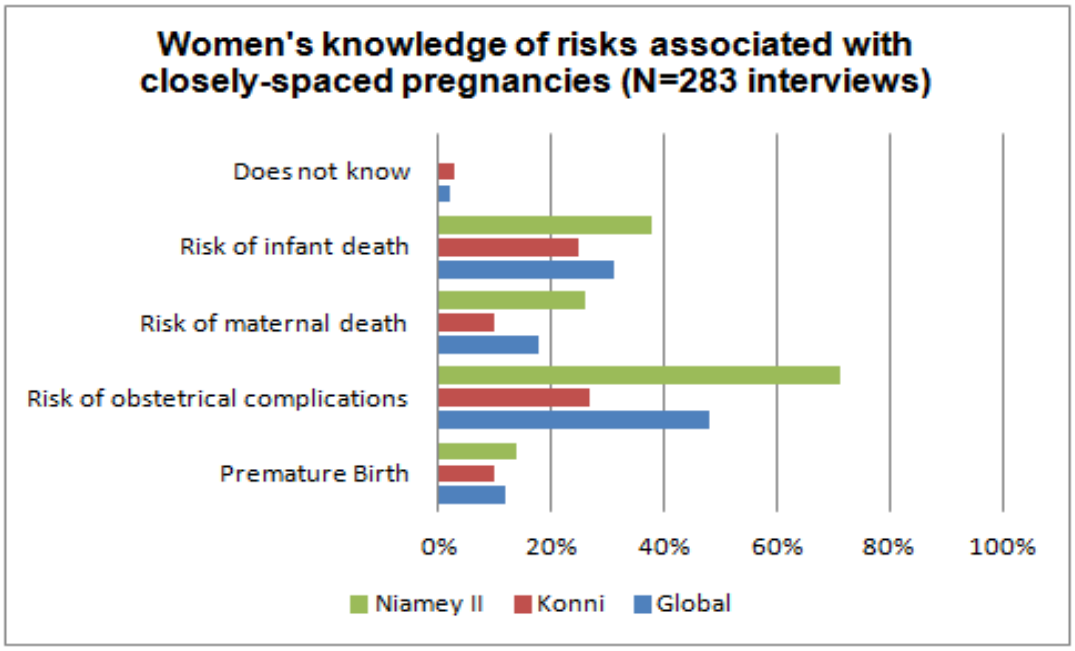
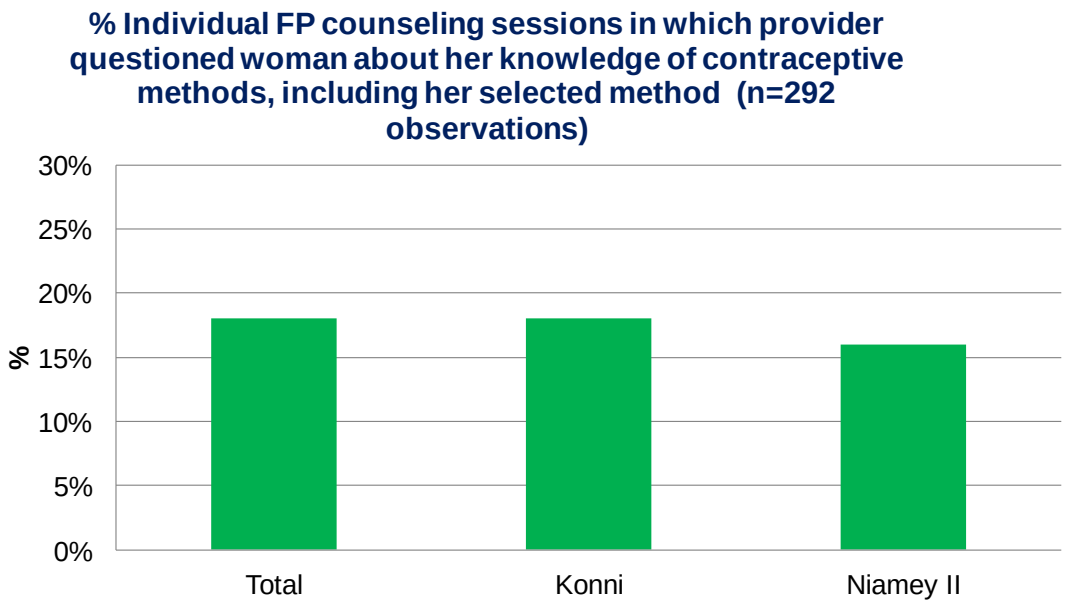


Figure 120: Family Planning: Percentage of individual FP counseling sessions in which provider questioned woman about her knowledge of contraceptive methods, 16 sites, Niger (Baseline 2013)



- **Figures 121 and 122 demonstrate improvements in post-partum FP counselling and method provision in Q1-3** :
    - % of women postpartum counseled in FP method options
    - % of women postpartum selecting a modern FP method (to begin in immediate postpartum period or follow up post-partum visit)
    - % women discharged with modern PPFP method of choice
    - % births after which couples received PPFP counseling prior to discharge of mother from maternity
  - As can be seen in Figures 120 and 121, improvement has been more rapid for routine PPFP counseling of women and for selection of a preferred PPFP method prior to discharge.
  - Improvement in the percentage of women discharged with a modern PPFP method of choice and percentage of couples counseled in PPFP has been gradual. As demonstrated in the baseline assessment, significant challenges persist to uptake of modern PPFP methods and to couple engagement in the Nigerien context including: 1) frequent stock-out of commodities (especially long-acting methods); 2) low provider competence and confidence; 3) service organization challenges around efficient integration of FP services into routine postnatal processes (especially for long-acting reversible methods such as the IUD); 4) the historically low participation of men in maternal services (antenatal, delivery and postpartum); and 5) traditions of deferring FP and other maternal and reproductive services until after the 40-day baptism period during which a Nigerien woman typically stays at home.

Figure 121: Family Planning: Percentage of women counseled for PPFP, selecting a modern PPFP method, and discharged with modern PPFP method of choice, 16 sites, Niger (Oct 2013-Aug 2014)

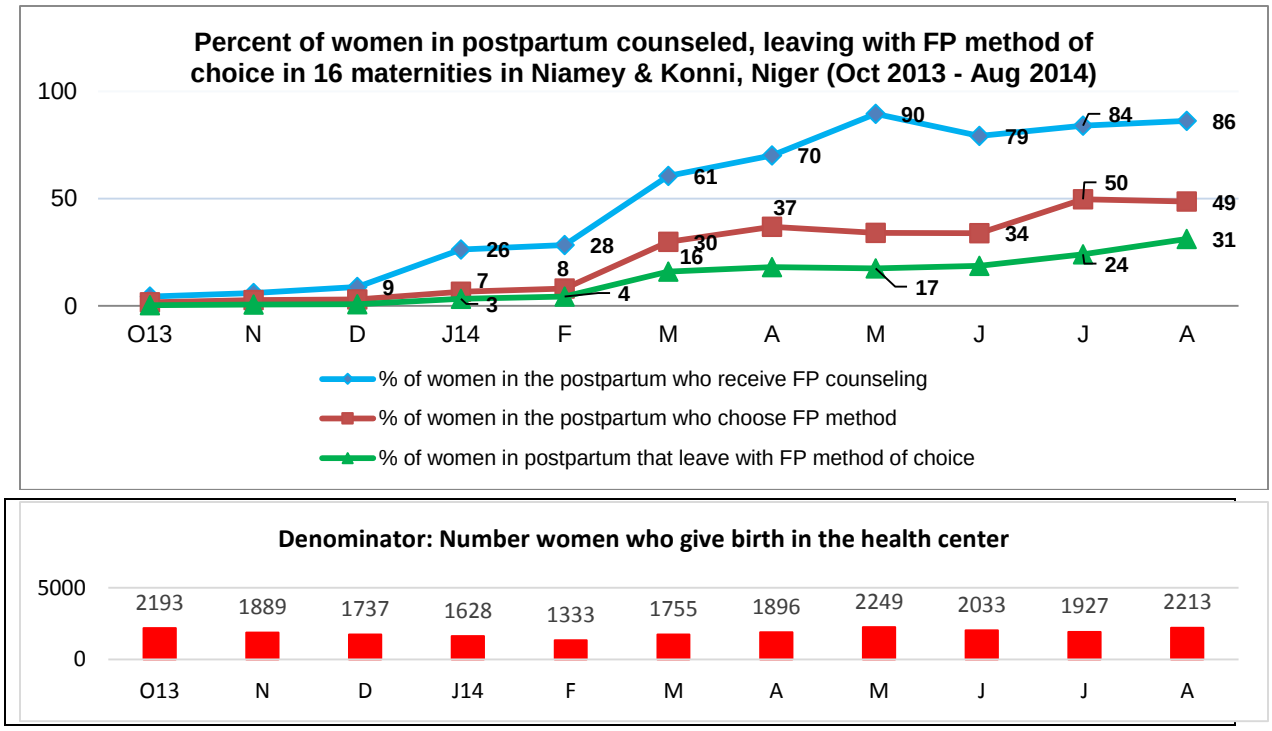
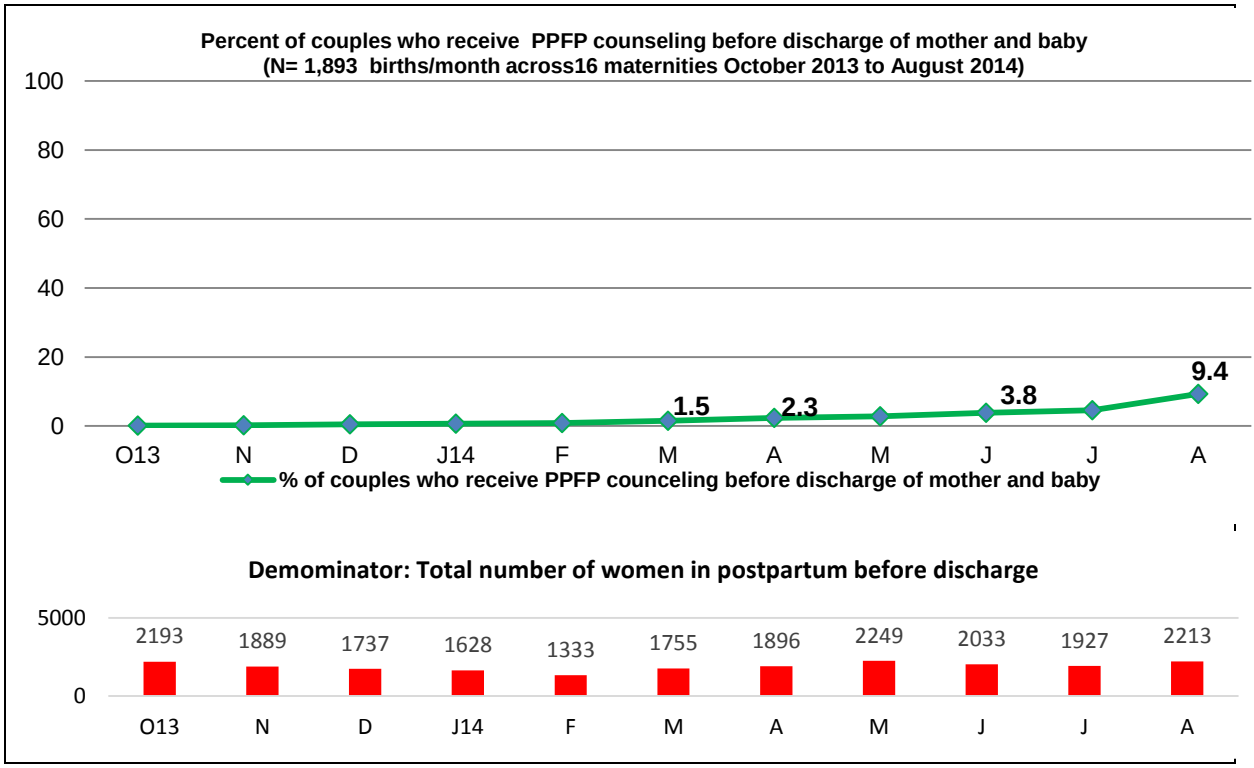


Figure 122: Family Planning: Percentage of births after which couples received PPFP counseling before discharge of mother (n=1,893 average births/month in 16 maternities), Niger (Oct 2013 - Aug 2014)



Activity 2. Postpartum FP as part of WHO Safe Childbirth Checklist implementation activity: Senegal

KEY ACCOMPLISHMENTS

- **Travel to Senegal by ASSIST staff Maina Boucar, Kathleen Hill, Astou Coly and WHO SDS partner Joyce Hightower to explore new SCC activity in Senegal** (Q3).
  - Visits to maternities including discussion of current status of PPFP services and provider perspectives (PPFP is one of 29 priority interventions in SCC); in general FP methods are not provided during the immediate post-partum period (before discharge from facility) in sites visited. Accomplishments include:
    - Agreement with USAID/Senegal, MOH MNH Division and stakeholders to test use of the SCC in five MOH maternities (2 hospital, 3 primary) in two districts in the Dakar vicinity
    - Agreement that the ASSIST/WHO team will work closely with the MOH and with USAID-funded IntraHealth partner to implement the improvement work, including a strong focus on integration of PPFP into SCC improvement work
    - First draft of operational plan reviewed with USAID/Senegal and IntraHealth
- **Travel to Mali by ASSIST staff Maina Boucar, Kathleen Hill, Astou Coly and WHO SDS partner Joyce Hightower to explore new SCC activity in Mali, including research component** (Q3).
  - Focus groups conducted with clients and providers to understand client and provider perspectives on post-partum FP services, including client priorities for counseling and method provision (e.g. group education sessions linked to follow-on individual counseling sessions versus exclusive individual counseling sessions, inclusion of partners, etc.). Accomplishments include:
    - Agreement to introduce the SCC in a sample of facilities in two districts in the Kayes region
    - Agreement to embed the SCC improvement work in a broader research activity that examines barriers and facilitators to use of the SCC in Mali facilities and compares introduction of the SCC linked to continuous QI in an intervention district versus introduction of the SCC without a QI intervention in a comparison district.
- **ASSIST finalized a detailed operational concept note and work plan to launch the new SCC work in Senegal,** based on discussions with the Mission, the MoH and key partners during and after a visit to Senegal by Kathleen Hill and Maina Boucar of the ASSIST project, and Joyce Hightower of WHO Service Delivery and Safety in May 2014.
  - ASSIST and its partner WHO Service Delivery and Safety will test use of the SCC in five MoH maternities (2 hospital, 2 primary) in 2 districts in the Dakar vicinity, working closely with the MoH and other key partners including IntraHealth. The SCC improvement work will be integrated into established district MoH work processes and structures to the extent possible.
- **ASSIST finalized the recruitment of a full-time Technical Coordinator to lead the SCC work in Senegal** who is expected to begin working for the ASSIST project (Q4).

Activity 3. Family Planning Quality Framework and global technical leadership

KEY ACCOMPLISHMENTS

- **Snapshot landscape review completed to assess established and needed tools related to:**
  - FP quality of care measures that can be integrated into routine information systems to support continuous improvement of FP services (including PPFP services).
  - Review of available provider clinical decision support and patient counseling tools related to contraception management in women with special needs (older women, women with risk factors, women with co-morbid conditions.

- Participated in the USAID-convened Community of Practice on Long-Acting Reversible Contraception (LARC) / Permanent Methods (PM) Community of Practice meeting held Jan 7 2014.

- **Prepared a first draft of the FP Quality framework** which is being continuously updated to incorporate learning being generated as part of cross-bureau and Mission-funded ASSIST FP work and partner work that incorporates a focus on quality of FP services (Q4).
- **Oral presentation on ASSIST/HCI post-partum FP improvement work at FP meeting** (April 2-3): *"Throughout the Reproductive Life Cycle: opportunities and challenges for empowering women and girls"* (US domestic and international reproductive health experts).
- **2014 Publication: Global Health: Science and Practice Journal (2014)** "Integrating Family Planning in post-partum care through Quality Improvement: Experience in Afghanistan."

RESULTS

Improvement in Key Indicators

Activity	Indicators	Baseline (October 2013)	Last value (August 2014)
Niger Post-Partum Family Planning	% women counseled for PPFP	4% (16 sites)	86% (16 sites)
	% women selecting a modern PPFP method;	2% (16 sites)	49% (16 sites)
	% women discharged with modern PPFP method of choice	0% (16 sites)	31% (16 sites)
	% births after which couple received PPFP counseling prior to discharge of mother	0.1% (16 sites)	9% (16 sites)

MATERNAL, NEWBORN, AND CHILD HEALTH

BACKGROUND

USAID ASSIST supports 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 leading causes of maternal, newborn, and child mortality. ASSIST cross-bureau funded activities through the Office of Health Systems focus on generating and disseminating learning on effective improvement and health system strengthening approaches to scale up and sustain integrated client-centered delivery of maternal, newborn, child health (MNCH) best practices along all points of the antenatal care, intra- and post-partum, postnatal care and early childhood continuum and household to hospital continuum.

PROGRAM OVERVIEW

Activities	What are we trying to accomplish?	At what scale?	Improvement Activity	Activity
1. WHO Safe Childbirth Checklist (SCC)	• Test/study use of WHO SCC as a tool to help improve care in a subset of maternities in Mali and Senegal as part of global WHO Safe Childbirth Checklist Collaboration	5-8 primary & referral maternities in Senegal (cross-bureau funded); 2 districts in Mali (field-funded)	x	

2. LAC Regional Newborn Alliance	• Strengthen USAID-supported KMC and Basic Newborn Resuscitation services and systems that support delivery of high quality KMC and newborn resuscitation; test multi-country "virtual collaboration" to improve MNH care.	El Salvador, Nicaragua, Dominican Republic, Guatemala and Ecuador		x
3. Survive & Thrive MNH QI Initiative	• Strengthen capacity of Survive and Thrive regional partnership stakeholders (global, regional and country) to apply improvement approaches to strengthen systems and improve quality of services for better outcomes for mothers and newborns. ASSIST leads the S&T QI TWG.	100,000 Babies Initiative (India, Nigeria and Ethiopia)		x
4. Global technical leadership	• Promote capacity of partners to improve care and strengthen essential system functions to achieve better health outcomes for women, newborns and children. • Participate in strategic technical initiatives to influence uptake of improvement approaches • Develop and disseminate technical frameworks and tools to strengthen QI efforts • Present at technical meetings to build awareness of USAID-funded investments and approaches to improving quality of care in LMICs	Global Technical Leadership		x
5. Uganda MNH improvement activity	• Under discussion; updated plan will be submitted in next quarter	TBD	x	

Activity 1. WHO Safe Childbirth Checklist (SCC)

KEY ACCOMPLISHMENTS

- **Key results from trip to Senegal by ASSIST staff Maina Boucar, Kathleen Hill, Astou Coly and WHO SDS partner Joyce Hightower to explore new SCC activity in Senegal Q3):**
  - Agreement with USAID/Senegal, MOH MNH Division and stakeholders to test use of the SCC in 5 MOH maternities (2 hospital, 3 primary) in 2 districts in the Dakar vicinity.
  - Agreement that the ASSIST/WHO team will work closely with the MOH and with USAID-funded IntraHealth partner to implement the improvement work.
  - First draft of operational plan reviewed with USAID/Senegal and IntraHealth.
- **Key results from travel to Mali by ASSIST staff Maina Boucar, Kathleen Hill, Astou Coly and WHO SDS partner Joyce Hightower to explore new SCC activity in Mali, including research (Q3)**:
  - Agreement to introduce the SCC in a sample of facilities in two districts in the Kayes region.
  - Agreement to embed the SCC improvement work in a broader research activity that examines barriers and facilitators to use of the SCC in Mali facilities and compares introduction of the SCC linked to continuous QI in an intervention district versus introduction of the SCC without a QI intervention in a comparison district. \
- **ASSIST finalized a detailed operational concept note and work plan to launch the new SCC work in Senegal,** based on discussions with the Mission, the MoH, and key partners. This was accomplished following a May 2014 visit to Senegal by Kathleen Hill and Maina Boucar of the ASSIST project, and Joyce Hightower of WHO Service Delivery and Safety (Q4).
- **ASSIST finalized the recruitment of a full-time Technical Coordinator to lead the SCC work in Senegal** who is expected to assume his role in the next quarter to launch the work plan activities once approved by the MoH (Q4).

Activity 2. LAC Regional Newborn Alliance

KEY ACCOMPLISHMENTS

- **Conducted two Kangaroo Mother Care (KMC) Community of Practice Virtual Forums:** The first forum, conducted in Q1, included participants from eight countries in Latin America and discussed indicators including for KMC and for preterm babies' care and programmatic indicators . The second virtual forum discussed experiences in starting and early consolidation of KMC programs in LAC hospitals in the context of the LAC Kangaroo Care Community of Practice and was conducted in Q3. Eleven countries participated in this forum, sharing important experiences and recommendations for the start and consolidation of KMC programs in Latin America. The success of the forum provides evidence of the feasibility of knowledge management through an Internet-based community of practice.
- **Held two KMC Community of Practice Webinars**: In Q3, ASSIST welcomed Kangaroo Foundation in Bogota, Colombia's Founder, Dr. Nathalie Charpak, to present about perspectives about the expansion of KMC in Latin America, past, present and future. More than 50 participants from throughout Latin America joined the webinar. In Q4, ASSIST hosted a second webinar featuring Dr. Goldy Mazia, Coordinator of the LAC Newborn Alliance and the USAID Maternal and Child Survival Program. Dr. Mazia addressed the topic "Recent scientific evidence on the advantages of the Kangaroo Mother Care method". Forty seven participants from seven different countries attended. More than 50 participants from throughout Latin American joinged the webinar.
- **Participation in 1st LAC KMC Conference in Bogota, Colombia, organized by the Kangaroo Foundation** (Q1). At the invitation of the Kangaroo Foundation, Ivonne Gomez and Miguel Hinojosa from ASSIST programs in Nicaragua and Ecuador presented on the progress of KMC programs. This was an opportunity to promote the KMC Community of Practice with many LAC new countries and audiences.
- **ASSIST attended and presented at the LAC Newborn Alliance annual meeting in** Bogota (Q4). At the meeting the LAC Newborn Alliance and the Kangaroo Care Foundation committed their partnership with ASSIST for implementing a virtual collaborative to improve care for premature babies in LAC hospitals during the current fiscal year.
    - Fifteen hospitals from 6 LAC countries (El Salvador, Nicaragua, Guatemala, Dominican Republic, Mexico, Ecuador), expressed their will to participate.
    - The collaborative will address improvement of care for premature babies through evidence-based interventions such as Kangaroo Care, an infection control bundle and antenatal corticosteroids for fetal lung maturation.

Activity 3. Survive & Thrive MNH QI Initiative

KEY ACCOMPLISHMENTS

- **ASSIST actively supported the Regional Center for Quality's training for professional associations on improvement.** The first wave of training started with Ugandan professional associations, with the expectation that teams of professional association members will, with our support, use the knowledge acquired to conduct maternal and newborn care quality improvement projects in selected health facilities. The participants of the Integrated Maternal and Newborn Care training of trainers (ToT) are drawn from the Ministry of Health, Uganda National Clinical Officers Association (UNCOA), Association of Obstetricians and Gynecologists of Uganda (AOGU), Uganda Nurses and Midwives Council (UNMC), Uganda National Association for Nurses and Midwives (UNANM), Uganda Pediatric Association (UPA), East Africa Pediatric Association (EAPA), and the East Central Southern Africa College of Nursing (ECSACON). Approximately 65 of those participating in the ToTs will be trained (drawn from 14 districts: Bugiri, Butaleja, Gulu, Iganga, Jinja, Kampala, Lira, Masaka, Mayuge, Mbale, Mbarara, Mitooma, Mukono and Soroti).(Q2)
- **Held coordination meeting between ASSIST,SUSTAIN and RCQHC** in Kampala, Uganda to coordinate support from existing quality improvement teams and coaches from ASSIST and SUSTAIN to the RCQHC-sponsored professionals from different Ugandan professional

associations who have been trained by the RCQHC and who will be coaching improvement teams in several facilities as part of Survive & Thrive regional initiative (Q3).

- **ASSIST launched a new QI Technical Working Group of the Survive & Thrive Global Development Alliance public-private partnership.** The QI TWG will focus on integrating QI processes into clinical training and supervision processes supported by the Survive & Thrive Global Development Alliance, including as part of the new three-country 100,000 Babies Initiative announced by Administrator Shah as part of the USAID Ending Preventable Child and Maternal Deaths (Q4).
  - Survive and Thrive QI TWG members include USAID, Laerdal Foundation (private partner), American Academy of Pediatrics (AAP), American College of Obstetricians and Gynecologists (ACOG), Save the Children's Saving Newborn Lives Program, American College of Nurse Midwives (ACNM), USAID Maternal Child Survival Project, National Institute of Child Health (NICH), and the USAID ASSIST Project.
  - The initial investment in creation of this QI TWG is expected to transition to funding with MCH element direct funds as ASSIST assumes leadership of the development of improvement capacity—building tools for integration into clinical training and supervision activities.

Activity 4. Global technical leadership

KEY ACCOMPLISHMENTS

- **ASSIST Participation at WHO MNCH Quality of Care Meeting in Geneva (December 2013):** Jim Heiby, AOR ASSIST, Kathleen Hill, and Jorge Hermida participated and presented at the meeting (Q1).
  - In-depth discussion on global level MNCH quality advocacy indicators, categorized by maternal, newborn, child encompassing structural, process and outcome indicators; using data/quality measures for continuous improvement; and challenges around collection of quality-related data in front-line delivery settings in low- and middle-income countries.
- **British Journal of Obstetrics and Gynecology (BJOG): Niger/Mali improvement case-study accepted for publication** in the Spring 2014 BJOG quality supplement (Q2). The articles authored by Boucar, Hill, Coly et al. is entitled "Improving Post-partum Care for Mothers and Newborns in Niger and Mali: A Case Study of an Integrated Maternal and Newborn Programme."
- **UN Commission on Life Saving Commodities and ASSIST Newborn Resuscitation publication: Improving Quality of Basic Newborn Resuscitation Services*: A framework for managers and skilled providers in low resource settings*.** Framework finalized and reviewed at annual meeting of UN Commission on Lifesaving Commodities (Q2); published by ASSIST (Q4)
- **Participation in technical working groups:** Integrated Community Case Management; HBB; UN Life-saving Commodities –Resuscitation and ACS; Inter-agency Newborn Health Indicators; Implementing Best Practices; Anemia Inter-disciplinary Task Force.
- **Dr. Jorge Hermida co-led a QI session on behalf of ASSIST at the "Essential Care for Every Baby" workshop in Addis Ababa**, sponsored jointly by USAID, MCHIP, the American Academy of Pediatrics, Save the Children, and the Laerdal Foundation, as part of the "Survive & Thrive" Helping Babies Survive regional initiative. Dr. Hermida presented on the basic concepts and methods of improvement and led a set of exercises and discussions about how improvement approaches can be applied to help implement the clinical content in the Essential Care for Every Baby (ECEB) module. More than 100 delegates from over 11 countries attended (Q3).
- **Participation by Kathleen Hill in WHO Every Mother Every Newborn QI initiative expert consultation** to design a WHO-led initiative to promote ongoing quality improvement of maternal newborn health care services at country level linked to a facility certification process (Q3).
- **Kathleen Hill and Jorge Hermida participated in "Integration of Maternal and Newborn Health Care: In pursuit of quality"** technical meeting convened by the Gates-funded Saving Newborn Lives project and the Gates-funded Maternal Health Task Force (September 9-10, 2014, Q4). Jorge Hermida presented on an MNH project implemented at community and facility level in Ecuador's Cotopaxi province and Kathleen Hill provided the closing meeting synthesis.

- **Kathleen Hill participated in a Postpartum Hemorrhage (PPH) Research Advisory Group convened by the Gynuity project with Gates funding** (September 23-24, 2014)**.** The meeting focused on results from research on the use of misoprostol for prevention of PPH in community and facility settings, quality of PPH care, reliable measurement of PPH and other topics.
- **Jorge Hermida participated in the Annual Technical Meeting convened by the LAC Newborn Alliance in Bogota, Columbia** in Q4. At this meeting the LAC Newborn Alliance and the Kangaroo Care Foundation committed to a partnership with ASSIST to implement a virtual collaborative to improve care for premature babies in LAC hospitals during the current fiscal year.

Activity 5. Uganda MNH improvement activity

KEY ACCOMPLISHMENTS

- **Supported Uganda MOH to develop a national newborn improvement strategy:** A draft concept paper on improvement in Newborn Health in Uganda was submitted (Q2).
- **ASSIST supported the National Newborn Health program to:**
  - Strengthen the National Newborn Steering Committee in its role of supporting and updating national policies, as well as work with the MOH on its stewardship role.
  - Establish newborn national quality indicators and include those as part of the National Health Information System.
  - Develop a training approach aimed for national scale-up, starting with the training of a cadre of national facilitators.
  - Strengthen national policies on: antenatal corticosteroids, prevention of newborn infection, and postnatal care.
- ASSIST supported Uganda Newborn National Steering Committee to discuss technical working groups plans on Born Too Soon, Antenatal Corticosteroids, Chlorhexidine, Antibiotics, HBB-plus and Hospital standards (Q3).
- Carried out a national quantification of neonatal resuscitation equipment in partnership with PATH International and Laerdal Foundation (Q3).
- Developed a district-level supervision tool that will be used to assess the level of implementation of the Newborn Health program (Q3).
- Supported the National Medical Stores (NMS) to ensure provision of dexamethasone for ACS in pilot sites (Q3).

mHEALTH

BACKGROUND

In early 2014, ASSIST developed an mHealth Systems Strengthening Framework to guide consideration of mHealth and mHealth technologies that can best augment health systems strengthening (HSS) and quality improvement (QI) efforts to overcome common system and quality gaps in low- and middle-income countries. The ASSIST mHealth systems strengthening framework builds on a rich history of mHealth taxonomies and partner initiatives led by leaders in the mHealth field, including the WHO mHealth Technical Evidence Review Group, the mHealth Alliance, and the mHealth Working Group.

PROGRAM OVERVIEW

Activities	What are we trying to accomplish?	At what scale?	Improvement Activity	Activity
1. Global technical	• Define a framework characterizing system and quality constraints amenable to application of mHealth technologies as	NA		x

Activities	What are we trying to accomplish?	At what scale?	Improvement Activity	Activity
leadership: mHealth health systems strengthening framework and associated activities	part of broader HSS and QI initiatives • Explore evidence and expert opinion on mHealth HSS technologies used to improve care in low-resource settings • Build consensus and uptake of mHealth technologies that can augment HSS and QI efforts to improve patient outcomes • Test use of framework mHealth technologies as part of ASSIST country-level improvement work (per funding)			

Activity 1. Global technical leadership: mHealth QI/HSS Framework and associated activities

KEY ACCOMPLISHMENTS

- **Convened technical meeting of e/mHealth "Bridging the Gaps" in January 31, 2014.** This technical working group meeting was convened by the USAID ASSIST Project with key mHealth and eHealth stakeholders and experts for the purpose of reviewing a working framework for selecting technological solutions that can help bridge quality and systems gaps to improve health care in resource-limited settings. The meeting also sought to build consensus on established, emerging, and needed mHealth and eHealth solutions that best address critical quality and systems gaps in low-resource settings and identify areas of collaboration for implementation and research. The group discussed the four domains of the framework within which mHealth and eHealth technologies can strengthen essential systems functions including:: 1) Real Time Care and Service Delivery, 2) Health Workforce, 3) Supply Chain / Essential Commodities, and 4) Information Systems and Data. The meeting concluded with a discussion of opportunities for collaboration on building the evidence base and promoting best practices in mHealth and eHealth to support quality improvement and health systems strengthening efforts.
- **Developed the mHealth Systems Strengthening Framework,** which focuses on four health systems domains particularly relevant for district and sub-district health system performance within which quality improvement efforts may incorporate mHealth solutions to help strengthen systems and improve quality of care and services. The four domains are: Service Delivery, Data and Information Systems, Human Resources for Health/Workforce, and Essential Commodities. For each domain, essential functions for the domain as well as common gaps in each function were defined through a literature review and interviews with expert informants. ASSIST team members also met with leading researchers in the mHealth field to promote alignment of the ASSIST mHealth framework with other mHealth implementation and research initiatives, including the WHO mHealth taxonomy initiative, known as the WHO mHealth Technical Evidence Review Group (mTERG). A communications brief on the mHealth Systems Strengthening Framework was published in March.

NON-COMMUNICABLE DISEASES

BACKGROUND

Non-communicable diseases (NCDs) are now the primary cause of death in all regions except Africa. USAID has recently developed a conceptual framework on NCDs and Injuries that builds on USAID's existing platforms and investments in nutrition, MNCH, family planning, and infectious diseases (HIV/AIDS, TB and others) to outline principles of deeper engagement in NCDs. Among other principles, the USAID NCD conceptual framework emphasizes: complementarily with existing priorities; disease prevention and health promotion; low-cost, cost-effective, and evidence-based interventions; priority to activities that add value and can be easily integrated into existing programs and service-delivery platforms; and a multi-sectoral approach. In the last quarter, the USAID Office of Health Systems provided ASSIST with modest funding to help advance the principles outlined in the

USAID NCD and Injuries conceptual framework. ASSIST (and its predecessor projects) have many years of experience implementing improvement work in the area of NCDs/chronic conditions including hypertension improvement work in Russia, integrated HIV/NCD services (Uganda, Tanzania), MNCH/NCD services (Ukraine), and CVD and asthma/COPD service delivery improvement at clinic and hospital level (Republic of Georgia). ASSIST will work closely with USAID OHS and Country Missions to define and advance activities that can contribute to and help advance the principles outlined in the USAID conceptual framework.

PROGRAM OVERVIEW

Activities ***pending mission approval***	**What are we trying to accomplish?**	**At what scale?**	**Improvement Activity**	**Activity**
1. Support MOH in a demonstration country to strengthen a national NCD strategy	• Support MOH in a demonstration ASSIST country to strengthen its NCD national strategy including a monitoring framework	N/A		x
2. Demonstrate application of improvement approaches to strengthen integrated HIV/NCD service delivery platforms	• Demonstrate application of improvement approaches to strengthen integrated NCD/HIV (or NCD/MNCH) service delivery platforms in selected high-volume sites (jointly leveraging Mission funding of HIV and/or MNCH service delivery improvement work when feasible)	TBD		x

Activity 1. Support MOH in a demonstration country to strengthen a national NCD strategy and Activity 2. Apply improvement approaches to strengthen integrated HIV/NCD service delivery platforms

KEY ACCOMPLISHMENTS

- Several meetings were held in a promising ASSIST country; a detailed concept note was developed and approved by OHS team in DC but unfortunately the work was not able to proceed due to other USAID country priorities.
- Discussions are now underway with the OHS team in DC and ASSIST staff in 2-3 countries to identify another ASSIST country for implementation of the OHS-funded NCD work (Q4).
- Meeting held with USAID OHS and EE Bureau representatives in Washington, DC, to discuss the proposed scope of work (Q2).
- An ASSIST gender technical brief was developed: “Addressing the Unique Needs of Men and Women in Non-Communicable Disease Services” (Q3).

4 Common Agenda Activities

GLOBAL TECHNICAL LEADERSHIP

BACKGROUND

The USAID ASSIST Project’s global technical leadership activities on behalf of USAID seek to further advance and inform the field of improvement by engaging and building capacity of country institutions, USAID implementing partners, and global health organizations to apply improvement methods to achieve better health outcomes. The project aims to serve as a conduit and catalyst for sharing, learning, and advancement in the field of improvement applied to various topics, including service delivery, district management, human resources management, chronic care, gender integration, community-level services, knowledge management, and evaluation of improvement

methods.

PROGRAM OVERVIEW

Activities	What are we trying to accomplish?	At what scale?	Improvement Activity	Activity
1. Increase application of improvement methods	• 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	National Regional Global		x
2. Demonstrate results	• Demonstrate the results of USAID's investment in health care quality improvement	Global		x
3. Build capacity in improvement	• Support the development of improvement competencies in ASSIST staff, counterparts, and implementing partners	Global		x
4. Expand awareness of improvement methods	• Increase awareness of ASSIST work and results nationally, regionally, and globally, beyond current circles of interaction	National Regional Global		x

Activity 1. Increase application of improvement methods

KEY ACCOMPLISHMENTS

- A key technical leadership activity over the past year was ASSIST's engagement with the Global **Human Resources for Health (HRH) Strategy Task Team**. ASSIST Director Dr. M. Rashad Massoud was named co-chair of the "**Quality Improvement and Regulation**" working group of the HRH Strategy Task Team; Dr. Tana Wuliji and Dr. Silvia Holschneider also participated. The working group prepared a paper summarizing research findings and the types of interventions that have been undertaken to date to address strategies for improving health worker productivity and performance in the context of Universal Health Coverage (UHC), focusing on the roles of standards, quality improvement, and regulation. The first draft of the paper was circulated for comment among members of the working group in July. Highlights of the final draft paper were presented at the Global Symposium on Health Systems Research in Cape Town.
- Over the past year, Dr. Massoud and AOR Dr. Jim Heiby contributed significantly to the development of the *FY2014 PEPFAR Quality Strategy: Phase I: Institutionalization of Countries' Ability to Improve HIV Clinical Programs.* The **PEPFAR Quality Strategy** was published in March 2014.
- In March 2014, ASSIST convened with WHO, USAID Office of Health Systems and Office of HIV/AIDS, World Bank, PAHO, and Gates Foundation the initial meeting of a new **working group on quality of care in the context of UHC**. The group is chaired by the WHO Service Delivery and Safety Department and seeks to define an action agenda for the partners to take forward to assure high quality UHC. Dr. Massoud and Dr. Heiby represented ASSIST at the second meeting of the Quality of Care and Universal Health Coverage Working Group Meeting in Washington in July. Going forward, this WHO-led group will bring together leading international agencies to refine strategies for improving quality within the context of UHC.
- Dr. Massoud was named to the Advisory Board for the **2015 WHO Global Report on Quality and Safety**. He participated in conference calls and the first face-to-face meeting of the advisory board, which is deciding on the structure and key themes for the global report.
- ASSIST hosted the **WHO's Scoping Consultation Meeting on strengthening quality of HIV clinical services** in resource-limited settings on September 15, 2014, with representatives from WHO, USAID, CDC, PEPFAR, ICAP, and the Global Fund to define priority technical areas for

WHO guidance for strengthening the quality of HIV clinical services as part of the 2015 WHO antiretroviral therapy guidelines update.

- Dr. Kathleen Hill was invited by the WHO Department of Maternal, Newborn, Child and Adolescent Health to participate in a small expert group that to inform the design and implementation of the new WHO and UNICEF-sponsored global "**Every Mother Every Newborn" quality initiative** intended to complement the Every Newborn Action Plan that was presented at the World Health Assembly in May.
- **Design teams named and new templates created for documenting the design of each country program.** As part of implementing the integrated design of country-level improvement interventions, in November the project rolled out a new "ASSIST design template" to be developed for each improvement activity. For each improvement activity, Chiefs of Party were asked to name the members of the design team who would contribute content expertise, local country content expertise, and improvement expertise. The product of each design team's work will be a completed design template which outlines the goal and aims of the improvement activity, explains the phasing of the improvement work, describes the package of evidence-based interventions (technical content) that will be implemented through the improvement activity, and the process and outcome measures (indicators) that will be used to measure results. The design templates complement the country improvement plans, which describe the improvement strategy proposed and how the activity will address human performance factors, health system issues, gender integration, scale-up, and sustainability.

Activity 2. Demonstrate results

KEY ACCOMPLISHMENTS

- **In FY14, four articles from ASSIST staff were published in peer reviewed journals, and the project published 12 case studies and 11 technical reports.** These and other short publications and products developed for country institutions are listed in Table 16. All are available on the ASSIST web portal.

Table 16: USAID ASSIST Publications, FY14

Articles Published in Peer-Reviewed Journals
Massoud MR, Mensah-Abrampah N. 2014. A promising approach to scale up health care improvements in low-and middle-income countries: the Wave-Sequence Spread Approach and the concept of the Slice of a System. *F1000Research* 2014, 3:100. First published 2 May 2014. Accessible here.
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Organizing for obstetric emergencies: How Kabarole Hospital in Western Uganda is saving mothers' lives. *Case Study* (January 2014)
Improving income-generating activities for vulnerable children and families at Agape Nyakibare Civil Society Organization. *Case Study* (January 2014)
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Applying a standards-based improvement approach to vulnerable children programming in Nigeria: Jane's story. *Cartoon*. (August 2014)
Applying a standards-based improvement approach to vulnerable children programming in Nigeria: Yaro's story. *Cartoon*. (August 2014)
National Standards for Improving the Quality of Life of Vulnerable Children. *Community Job Aid*. (March 2014)
National Standards for Improving the Quality of Life of Vulnerable Children in Nigeria. *Nigeria Community Booklet.* (February 2014)
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Guide for Applying Improvement Methods to Implement the National Standards for Improving the Quality of Life of Vulnerable Children in Nigeria (February 2014)
Flyers and short reports (date published)
Linking HIV care and management of chronic non-communicable diseases. Experiences from Buikwe District, Uganda (2-page flyer) (October 2013)
Strengthening community systems to increase uptake and retention of PMTCT services in Tanzania (4-page flyer) (October 2013)
Applying the science of improvement to strengthen systems and improve health outcomes in Tanzania (4-page flyer) (November 2013)
USAID tackles the burden of non-communicable diseases in Europe and Eurasia Region (2-page flyer) (November 2013)
A Global Improvement Framework for Health worker in-service training: Guidance for improved Effectiveness, Efficiency and Sustainability (4-page flyer) (November 2013)
Applying Science to Strengthen and Improve Systems. Current Field Activities (2-page flyer) (December 2013)
Applying Science to Strengthen and Improve Systems. USAID ASSIST Project Five-year Cooperative Agreement in the USAID Office of Health Systems (4-page flyer) (December 2013)
Applying Science to Strengthen and Improve Systems. USAID ASSIST Project Five-year Cooperative Agreement in the USAID Office of Health Systems (4-page flyer) (January 2014)
Improving Alcohol and Tobacco Control during Pregnancy in Ukraine (2-page flyer, also published in Ukrainian) (January 2014)
Health Worker Engagement Study: Tanzania (2-page flyer) (February 2014)
Improving Health Worker Performance (2 page flyer) (February 2014)
Integrating Gender in Voluntary Medical Male Circumcision Programs to Improve Outcomes. *Gender Brief* (March 2014)
Rapid Assessment of the Health Worker In-Service Training Situation in Ethiopia: Survey of Training Program Provider Practices and Key Informant Interviews (2-page flyer) (March 2014)
Leveraging mHealth to Strengthen Health Systems and Improve Care (2-page flyer) (March 2014)
USAID ASSIST Project: Uganda Technical Assistance (2-page flyer) (April 2014)
Addressing the Unique Needs of Men and Women in Non-communicable Disease Services. *Gender Brief* (May 2014)
Integrating Gender in Voluntary Medical Male Circumcision Programs to Improve Outcomes. *Gender Brief* (June 2014)
Improving services for orphans and vulnerable children in Uganda (2-page flyer) (June 2014)
Community Support for the HIV and AIDS Continuum of Response in Uganda (4-page flyer) (August 2014)
Addressing Gender Issues in Postpartum Family Planning Services. *Gender Brief* (August 2014)
Colaborativos virtuales para mejorar la salud materno infantil (2-page flyer) (September 2014)

- **Expanding the peer-reviewed publication of results**: As a new strategy to expand the peer-reviewed publication of results from ASSIST-supported improvement efforts, ASSIST has

purchased 100 subscriptions with the *British Medical Journal* Quality Reports program to enable staff and counterparts to develop and publish the results of individual health care quality improvement project in the peer-reviewed, online *BMJ Quality Reports* journal. These 12-month subscriptions, effective Oct. 1, 2014, offer country teams the ability to subscribe to BMJ's online learning resources to facilitate the documentation of individual improvement projects in a structure consistent with the SQUIRE guidelines.

- **Presentations on improvement methods and results made at 25 national, regional and international conferences**: As shown in Table 17, ASSIST staff made 65 oral presentations and presented 21 posters at these conferences during FY14.

Table 17: USAID ASSIST Conference Presentations, FY14

Conference	ASSIST Staff Participation
The United Republic of Tanzania Ministry of Health and Social Welfare National Family Planning Conference, October 9-11, 2013, Dar es Salaam, Tanzania	• Yohana Miramweni made the oral presentation "Using improvement methods to meet the family planning needs of PLHIV in Manyara, Kilimanjaro and Morogoro regions, Tanzania" • Rose Burungi made the oral presentation "Integrating Family Planning into HIV/AIDS Services in Uganda" • Valeria Makatini of the Kwazulu-Natal Department of Health presented the poster, "Rethinking IUCD use as a contraceptive option in KwaZulu-Natal, South Africa" with support from ASSIST
International Society for Quality in Healthcare (ISQua) Conference, October 13-16, 2013, Edinburgh, Scotland	• M. Rashad Massoud and Shawn Dick, together with Malcolm Daniel and Jason Leitch of NHS Scotland, led the skill-building workshop, "Applying a Reliable Design Framework to Improve Quality of Care for Your Patients" • M. Rashad Massoud led the interactive session, "Improving at Scale in Low- and Middle-Income Economies" and also chaired the session "Quality and Safety in Transitional and Developing Countries". • Isaac Chome Mwamuye made the oral presentation "Increasing the uptake of maternal health services of a rural community in Kenya by enhancing community-facility linkages" • Flora Nyagawa made the oral presentation "Improving Access to Health services for Most Vulnerable Children in Community Settings: A case of Bagamoyo district- Tanzania" and presented the poster "Let's clean up this mess! A community-based strategy to improve food hygiene and sanitation at a highway travel stop: Lugono Experience, Morogoro Region, Tanzania" on behalf of Farida M. Mgunda and Carle Lyimo. • Kate Fatta made the oral presentation "Barriers and facilitators of institutionalization of quality improvement in Niger" on behalf of Maina Boucar • Rhea Bright made a short oral presentation "Strengthening community systems to increase uptake and retention of PMTCT services in Tanzania" and presented the posters "Working With Teams To Improve Quality of Prevention of Mother-to-Child Transmission of HIV Services: Successes Challenges and Lessons Learnt" on behalf of Elizabeth Hizza and "Comprehensive Counseling, Health Education and Support of HIV-positive Pregnant Women as a Factor to Improved Quality of Services to HIV Exposed Infants" on behalf of Monica Ngonyani • Pamela Marks made a short oral presentation "Transforming Health System for People Living with Chronic Conditions; What can be done in HIV Chronic Care, Tanzania Experience" on behalf of Joseph Kundy • John Byabagambi presented the poster "Functional improvement teams are positively associated with linkage of HIV-positive mothers into HIV care"
CORE Group Fall Meeting, October 16-17, 2013, Washington, DC	• Allison Annette Foster and Ram Shrestha presented on the HCI-developed CHW Program Decision-making Toolkit at a pre-meeting workshop on "Decision-making support for developing and effectively managing CHW programs" • Ram Shrestha made a plenary presentation on the CHW experience in Nepal • Allison Foster led a Power Breakfast Roundtable on "Hot Topics on CHWs" • Lani Marquez and Lenette Golding of CARE led a lunchtime Lunch Roundtable "A share session on how to stimulate a culture of learning in your organization" • Allison Foster presented "Empowering Health Workers to Deliver Quality Care" • ASSIST had a resources tables where ASSIST and HCI publications, including

Conference	ASSIST Staff Participation
	the newly revised CHW AIM Toolkit, were distributed
American Evaluation Association, October 16-19, 2013, Washington, DC	• Edward Broughton delivered two half-day workshops: "Cost-effectiveness of health and human services programs" levels I and II • Edward Broughton gave a 45-minute "expert lecture": "Do you really trust the numbers? Health data validity around the world" • Lynne Franco and Lani Marquez presented "Wrestling With the Data Beast - Developing an Approach to Using Quality Improvement Monitoring Data to Tell a Bigger Story"
Regional Conference on Health District, October 21-23, 2013, Saly, Senegal	• Maina Boucar made the oral presentation "Applying QI to Human resources management at the district level in Niger: A model for district health systems strengthening" • Martin Muhire made the oral presentation "Improving care for people with chronic conditions– A case study of changing health systems, Buikwe district, Uganda"
Regional Psychosocial Support Forum, October 29-31, 2013, Nairobi, Kenya	• Roselyn Were spoke on behalf of URC at the Tuesday opening session • Roselyn Were and Stanley Masamo led a QI workshop (Skill-building 2) on Wednesday • Diana Chamrad was a facilitator at a skill-building on standards (Skill-building 3) on Wednesday • Kate Fatta and Esther Kahinga led a skill-building session on knowledge management (Skill-building 4) on Wednesday • Stanley Masamo presented in a special session on psychosocial services in Kenya (Special Session 2: Kenya's experience developing PSS Guidelines) on Wednesday • Diana Chamrad moderated a panel on the Partnerships in Community Child Protection on Thursday
International Union on Tuberculosis and Lung Disease Conference, October 30- November. 3, 2013, Paris, France	ASSIST Swaziland three posters on work funded by ASSIST: • "TB screening and mapping of miners and examiners in Swaziland" by S. Haumba; N. Mdluli; M. Calnan; T. Dlamini; V. Jele • "MDR-TB treatment outcomes among HIV-infected and HIV non-infected patients in Swaziland: A review of routinely collected data" by N. Mdluli • "Drug resistance profile of patients with pulmonary tuberculosis in Swaziland" by C. Mlambo; S. Haumba; M. Calnan; G. Maphalala; J. Manjengwa; T. Zananwe; J. Ongole; T. Dlamini
American Public Health Association Annual Meeting, November 2-6, 2013, Boston, MA	• Rhea Bright made the oral presentation "Transitioning to the WHO 2010 PMTCT and Infant Feeding Guidelines at the local level: Identifying and addressing operational challenges in Tanzania."
Third National Quality Improvement Forum on Health Care, November 26-28, 2013, Dar es Salaam, Tanzania	• M. Rashad Massoud delivered a keynote address "Quality Improvement to Address Health Systems Strengthening" • Flora Nyagawa made two oral presentations: "Involvement of most vulnerable children in responding to improving their health services" and "Optimising linkages between the community and health facilities to improve care and treatment of PLHIV in Tanzania" • Joseph Kundy made the oral presentation "Exploring the relationship between engagement and performance of health workers delivering HIV services in Tanzania" • Yohana Mkiramweni made the oral presentation "Using improvement methods to meet the family planning needs of PLHIV in Manyara, Kilimanjaro and Morogoro regions, Tanzania" • Stella Mwita presented two posters: "Instituting data quality protocol to verify quality of data within CTC and RCH services within ASSIST Project" and "Preparedness for Option B+ in districts supported by the Partnership for HIV-Free Survival in Tanzania" • Elizabeth Hizza presented the poster "Can communities contribute to improving

Conference	ASSIST Staff Participation
	service uptake? Community PMTCT experience in Iringa District Council” • Following the conference, Dr. Massoud delivered a separate “Grand Rounds” address on “The Science of Improvement”
Third Global Forum on Human Resources for Health, November 11-13, 2013, Recife, Brazil	• Allison Annette Foster presented “Monitoring and Accountability Framework for National Governments and Global Partners, in Developing, Implementing, and Managing CHW Programs” at the USAID-led session, “SE4-SE5: Strengthening the role of Community Health Workers in Achieving Universal Healthcare Coverage: Moving from Fragmentation to Synergy” • Tana Wuliji led and presented at the side event “SE30: Improving health worker in-service training effectiveness, efficiency and sustainability: Harvesting good practices and lessons learnt”
2014 Prince Mahidol Award Conference, 27-31 January 2014, Bangkok, Thailand	• ASSIST supported USAID and CDC in convening a three-hour side session on “Strengthening the Continuum of Learning” which looked at both pre-service and in-service training and featured the in-service training improvement framework • ASSIST, USAID, WHO and the Uganda-based Regional Center for Quality of Health Care convened a 90-minute session on “Integrating Improvement Competencies into Pre-service Education”
5th Quality Management Conference at Arab Health Week, January 27-29, 2014, Dubai, United Arab Emirates	• M. Rashad Massoud gave a keynote address at the conference, “Improving Health Care” • Dr. Massoud also made the presentation, “Designing improvement for local ownership, great results, and learning”
Global Health Mini-University, March 7, 2014, Washington, DC	• Ram Shrestha and Rhea Bright presented the interactive session, “The Strength of the Community - A foundation for healthcare delivery”
Throughout the Reproductive Life Course Global Technical Meeting, April 2-3, 2014, Washington, DC	• Kathleen Hill presented “Integrating Family Planning into Postpartum Care through Quality Improvement in Afghanistan”
mHealth for Maternal Health: Bridging the Gaps, April 7-8, 2014, Boston, MA	• Kathleen Hill presented “The Case of Mariama and Boubacar in Zaza District.” The meeting was sponsored by Maternal Health Task Force at Harvard School of Public Health
International Forum on Quality and Safety in Healthcare, April 8-11, 2014, Paris, France	• M. Rashad Massoud and Maina Boucar led the half-day mini-course M12: “Leadership skills to support improvement: an interactive workshop for global health leaders.” • Jorge Hermida presented “Bridging the gap: taking evidence-based interventions to millions in developing countries” in session A8: Large-scale improvement in low- and middle-income countries. • Edward Broughton led session G4: “Are you sure your improvements are cost-effective?” • Lani Marquez and Kate Fatta led session H9: “Improving improvement: Leveraging tacit learning for better improvement.” • Tana Wuliji and Leslie Anne Smith led panel session I9: “National and regional efforts to build health worker improvement competencies: What works?” with commentary by Diana Frymus. • M. Rashad Massoud and Mirwais Rahimzai presented “Designing improvement for local ownership, great results, and learning" in session D2: Leading transformational change across the system." • M. Rashad Massoud made the plenary presentation, “The countdown for the Millennium Development Goals: Can improvement science help achieve the

Conference	ASSIST Staff Participation
	MDG targets?" in the session A1: Change on a global scale. • Tamar Chitashvili presented the poster "Improving quality of diagnosis and management of chronic obstructive pulmonary disease in Georgia."
CORE Spring Global Health Practitioner Conference May 5-9, 2014 Silver Spring, MD	• Taroub Faramand and Elizabeth Silva presented "Changing Behaviors of Women and Men to Improve Health Outcomes through the USAID ASSIST Project" • Elizabeth Silva presented the poster "Using Quality Improvement to Integrate Gender - An Innovative Approach" at the May 6 evening poster session • Taroub Faramand presented "Health Sector Approaches to Prevent and Respond to Gender Based Violence" • Pamela Marks presented "The ASSIST mHealth Systems Strengthening Framework: An Evolving Framework" at the mHealth session on May 7, "Leveraging Technologies for Systems Strengthening in the Community"
American Evaluation Association Summer Institute, June 3-4, Atlanta, GA	• Edward Broughton presented a workshop on cost-effectiveness analysis by special invitation to this annual learning event.
Heidelberg Quality Forum, June 19-20, Heidelberg, Germany	• M. Rashad Massoud participated in the first Heidelberg Quality Forum, convened by the University of Heidelberg and the German International Cooperation Agency (GIZ). The focus of the meeting was on harmonizing quality improvement methods along the core principles of improvement science.
TOPS/Food Security and Nutrition Network Knowledge Sharing Meeting, July 10-11, 2014, Washington, DC	• Lani Marquez led a 90-minute session with Alyssa Lowe of CARE on "What is knowledge management and how can it improve your food security program?"
20th International AIDS Conference, July 20-25, 2014, Melbourne, Australia	• M. Rashad Massoud and Bruce Agins of HEALTHQUAL International made the oral presentation, "Improving Care for Patients Living with HIV/AIDS" at the ICAP pre-conference meeting on "HIV and Health Systems" • Tana Wuliji made the oral presentation, "Better HIV care through stronger community systems: Impact of quality improvement in Ethiopia, Uganda, Tanzania" at the ICAP pre-conference meeting on "HIV and Health Systems" • Edward Broughton made the oral presentation, "Measuring the cost-effectiveness of improving quality at scale" at the ICAP pre-conference meeting on "HIV and Health Systems" • Tamara Nsubuga-Nyombi made the oral presentation, "Improving care of HIV-infected breastfeeding mothers and their babies: Early results from the Partnership for HIV-free Survival Initiative in Uganda" at a satellite meeting on "Infant feeding in the context of HIV and ARVs" [One of her slides was presented in an IAS plenary by Shaffiq Essajee of the Clinton Health Access Initiative] • Tamara Nsubuga-Nyombi presented the posters "How can we keep HIV positive mothers and their babies in care until the baby is 18 months old? Results of an eMTCT collaborative in 22 health facilities in Uganda" and "Sustaining HIV care and treatment outcomes in resource limited settings; Lessons from a quality improvement Intervention in Buikwe district, Uganda" • Edward Broughton presented the posters, "Factors Associated with Loss to Follow-up among ART Patients in Cote d'Ivoire,""Strategy and Costs for Tracing ART Patients Lost to Follow-up in Cote d'Ivoire," and "Improving quality of voluntary medical male circumcision through a continuous quality improvement approach: Uganda's experience" • Presentations and posters may be accessed on the ASSIST website.
Asia Pacific Forum on Quality in Healthcare (APAC) 2014, Sept. 1-3,	• M. Rashad Massoud led the full-day pre-conference workshop, "Applying a Reliable Design Framework to Improve Quality of Health Care" • Tana Wuliji participated in the panel "Workforce for the 21st Century Healthcare-what does an effective modern health workforce look like?"

Conference	ASSIST Staff Participation
2014, Melbourne, Australia	• M. Rashad Massoud and Tana Wuliji led a session with Benedict David of the Australian Department of Foreign Affairs on "Learning to Unlearn and Improve"
East Africa Share Fair: Meeting FP202 Goals through Knowledge Exchange, Sept. 10-11, 2014, Arusha, Tanzania	• Betty Hizza and Faridah Mgunda made the presentation, "The Power of Improvement Science on Increasing: Access, Uptake Retention and Quality of Family Planning Services: A Case Study from Tanzania"
FLASOG Annual Meeting, Sept. 15-17, 2014, Guayaquil, Ecuador	• Mario Chavez made the oral presentation "Linking traditional and formal health care systems to save the lives of mothers and newborns"
Third Global Symposium on Health Systems Research, Sept. 30 – Oct. 3, 2014, Cape Town, South Africa	• M. Rashad Massoud and Tana Wuliji participated in the USAID-sponsored pre-conference HRH satellite presenting the working group #7 findings on "Performance, quality, productivity, and regulation" • Tana Wuliji made the oral presentation, "Enhancing Patient-Centered Care: Translating Knowledge into Action for CHW Performance" • Ram Shrestha made the oral presentation, "Strengthening the community system to increase access to people-centered care in Ethiopia" • Martin Muhire made the oral presentation, "Experiences of how patients are involved in tracking fellow patients back to HIV chronic care at a health centre III in Uganda" • Tamar Chitashvili presented the poster, "Addressing rational use of medication in pediatric patients with respiratory tract infections through collaborative improvement in Georgia" • Astou Coly presented the poster, "Perspectives from ART patients in Cote d'Ivoire" (The poster was awarded 2nd place in the best poster competition for the day it was presented) • Herbert Kisamba presented the poster, "Improving access to essential medicines at health facilities through active engagement of district leadership: experience from Uganda" • Joseph Kundy presented the poster, "Better HIV care – why does health worker engagement matter? A cross-sectional mixed methods study of health worker performance and engagement in Tanzania"

- ASSIST staff also carried out a large number of technical briefings during FY14:
  - On March 18, 2014, Dr. Diana Chamrad participated in the USAID/OHA webinar, "Creating Partnerships in Community Child Protection and Quality Improvement."
  - On March14, 2014, Dr. Kathleen Hill and Dr. Jorge Hermida presented at MCHIP on ASSIST's work on improving the diagnosis and management of pre-eclampsia and eclampsia in Niger and Mali.
  - On March 12, 2014, Dr. Massoud conducted a seminar at the World Bank on improving health care.
  - On April 14, Dr. Massoud presented the seminar, "The Science of Improvement: Demystifying Fact from Fiction" to staff at the World Health Organization in Geneva.
  - On April 28, Dr. Massoud, Ms. Lani Marquez, Dr. Edward Broughton, and Dr. Victor Boguslavsky briefed USAID OHS Director Ms. Karen Cavanaugh and Deputy Director Ms. Kathryn Panther on the USAID ASSIST Project, the Science of Improvement, How Knowledge Management Supports Improvement, ASSIST's Research and Evaluation portfolio, and Scale-up. The briefing was held at URC.
  - On May 1, Dr. Taroub Faramand conducted a briefing at USAID on ASSIST's approach to gender integration in quality improvement.
  - On May 20, Dr. Tana Wuliji conducted a briefing at USAID on "Strengthening pharmacy workforce. Improving HIV medicines use and availability in Uganda: Lessons learnt from an

improvement collaborative."

  - On June 12, Dr. Stella Mwita and Ms. Monica Ngonyani presented results from Tanzania's efforts to improve retention of mother-baby pairs in HIV care for the Partnership for HIV-Free Survival quarterly partners call.
  - Dr. Hill and Ms. Elizabeth Silva shared the USAID ASSIST approach to integrate gender through the ASSIST Project with USAID HIDN Gender Advisor Ms. Niyati Shah on June 20.
  - On June 20, Ms. Marquez and Mr. Sidhartha Deka presented on ASSIST's use of knowledge management (KM) to support health care improvement to Johns Hopkins University (JHU) Center for Communication Programs staff in Baltimore. Ms. Marquez also presented a case study on "How KM Supports Health Care Improvement in Uganda" at the JHU Summer Institute course on Knowledge Management for Public Health.
  - On June 27, Ms. Kim Ethier Stover presented on "Improving Community Health and Social Service Systems" to Ms. Mercy Mayebo, Civil Society Advisor of USAID/Uganda.
  - On July 2, Dr. Taroub Faramand made a presentation on ASSIST's work on gender integration in improvement activities to PEPFAR's Gender Working Group.
  - Dr. Broughton presented to USAID staff on "Cost-effectiveness Analysis for Improving Health Systems" on July 30, 2014 as part of a new USAID Office of Health Systems brown bag series featuring the work of ASSIST. His presentation is available on the ASSIST website.
  - On August 28, 2014, Dr. Faramand presented to USAID's Population and Reproductive Health Gender Team about gender monitoring and evaluation and the USAID ASSIST approach to address gender issues.
  - On September 17, 2014, Dr. Tana Wuliji presented to USAID and PEPFAR staff on "Health worker engagement and HIV care: What's the connection? Findings from Tanzania" as part of the USAID Office of Health Systems brown bag series featuring the work of ASSIST.
  - On September 22, 2014, Dr. Jorge Hermida presented on the accomplishments of the Spanish-language Salud materno infantil knowledge portal to the annual meeting of the LAC Newborn Health Alliance in Bogota, Colombia.
  - On September 25, 2014, Dr. Faramand and Ms. Elizabeth Silva met with USAID's Maternal Child Survival Program Gender Advisor Myra Betron, to brief her on the ASSIST gender integration approach, activities and lessons learned, with a specific focus on MNCH.

- ASSIST convened the meeting "**Bridging the Gaps: Leveraging m/eHealth to Achieve Strong Health Systems and High Quality Care in Low-Resource Settings**" in Washington, DC on January 31, 2014. It brought together over 40 mHealth and eHealth stakeholders and experts for the purpose of reviewing a new working framework developed by ASSIST for selecting technological solutions that can help bridge quality and systems gaps to improve health care in resource-limited settings.
- On February 5 and March 13, 2014, Dr. Massoud led seminars for PEPFAR staff on "The Science of Improvement and Supporting Field Application of the PEPFAR Quality Strategy."
- On February 18, 2014, M. Rashad Massoud, Allison Foster, Edward Broughton, and Sarah Smith Lunsford participated in the day-long seminar sponsored by ASSIST, Capacity Plus and the World Bank on "Supporting Country-Led Efforts to Recruit and Retain Health Workers and Improve Their Productivity."
- On February 19, 2014, Dr. Edward Broughton led a webinar on the cost-effectiveness of medical care in low-resource settings. The webinar was sponsored by the International Center for AIDS Care and Treatment Programs (ICAP) at Columbia University's Mailman School of Public Health for participants in the "Introduction to Quality and Quality Improvement" training course implemented by ICAP. A recording of the webinar is available at: http://columbiauniversitymsph.adobeconnect.com/p99y9ab17s6/.
- Dr. Edward Broughton delivered a webinar sponsored by ISQua on "The Cost-effectiveness of Improving Medical Services in Resource-poor Settings" on May 21. The webinar can be viewed on the ISQua website.
- URC hosted for the Embassy of Georgia a Roundtable Discussion on Improving Non-

communicable Disease Care and Outcomes in Georgia on September 26, 2014 at which Dr. Tamar Chitashvili presented the results of the ASSIST NCD improvement work in Georgia. The Georgian Minister of Labour, Health and Social Affairs and the Director of the National Center of Disease Control attended, along with representatives of USAID, CDC, NIH, and the World Bank.

Activity 3. Build capacity in improvement

KEY ACCOMPLISHMENTS

- **Development of competency-based learning modules.** At the beginning of FY14, a group of ASSIST countries pooled funds to support the development a set of competency-based learning modules to build basic improvement competencies among staff and counterparts. This activity will utilize the best of what we have learned from application of improvement science in lower and middle-income countries, the state-of-the-art in improvement science, and the state-of-the-art in adult learning science to develop a set of competency-based learning modules that can be used to build the competencies of staff, counterparts and implementing partners. An expert in instructional design, Dr. Julie Dirksen, was identified to work with ASSIST as a consultant and partner with content experts to develop the modules. During the year, we developed an outline structure for the learning modules and analysed the competencies needed by varies groups of stakeholders in our work, including improvement teams, improvement team leaders, local coaches, improvement advisors, senior improvement advisors, and system leaders. We have started to review the content necessary for the competencies for each of these groups and have begun the development of the basic improvement course for building improvement team competencies.

Activity 4. Expand awareness of improvement methods

KEY ACCOMPLISHMENTS

- **Created new ASSIST project listserv using iContact**: In response to a request from Ms. Diana Frymus of OHA, we created a USAID ASSIST Project listserv which was launched in July. People can subscribe to the listserv here and receive monthly general updates from the project or topic-specific updates.
- **Case study questionnaire revised and cases selected for further development**: ASSIST staff participated in several meetings to refine the case book guidelines and have piloted tested the guidelines. Ms. Feza Kikaya continued to provide ongoing management support to Dr. Jim Heiby for his case book project.
- **Expert consultation on gender-responsive health governance:** Taroub Faramand and Elizabeth Silva participated actively in the USAID Health Policy Project's (HPP) Gender Responsive Health Governance two-day expert consultation May 28-29. They proposed a measurement for consideration by the HPP to determine the extent to which a health system is gender responsive: by evaluating the extent to which the MOH is implementing gender-sensitive programs and providing gender-sensitive services.
- **Submitted four health systems strengthening cases**: In July, ASSIST staff developed and submitted four country cases from Kenya, Mali, and Uganda for the USAID Call for Health Systems Strengthening Cases.

KNOWLEDGE MANAGEMENT

BACKGROUND

USAID ASSIST is supporting the harvesting, packaging, and dissemination of learning from the improvement implementation and research and evaluation work the project supports at the country level. Through our knowledge management (KM) work, we integrate learning across countries and make that learning available through face-to-face events and web portals, in a wide variety of formats, including case studies, blogs, improvement stories, technical reports, tools, and eLearning. We use social media to connect with implementers who can use improvement methods and knowledge products. The ASSIST knowledge portal is managed by our partner Johns Hopkins University Center

for Communication Programs (JHU-CCP).

In addition, recognizing the value-added of addressing gender factors in health care access and delivery as part of improvement work, USAID ASSIST emphasizes gender integration as a key area of learning on how to make improvement activities more effective. Building on the expertise of our partner WI-HER LLC, we are supporting countries to integrate gender considerations wherever relevant in facility- and community-level improvement efforts.

PROGRAM OVERVIEW

Activities	What are we trying to accomplish?	Improvement Activity	Activity
1. Continuously refine the KM strategy for ASSIST	• Conduct studies to evaluate and inform ongoing enhancements to the ASSIST KM system; monitor usage statistics for the ASSIST web portal and social media; submit annual KM and documentation reports to USAID • Coordinate annual work plan development and manage Quarterly Review Meeting (QRM) reporting and semi-annual and annual reporting to USAID		x
2. Manage a knowledge portal for improvement evidence and information	• Operate the ASSIST knowledge portal • Support country teams to operate local websites (India, Ecuador) • Publish blogs, technical reports, and other knowledge products highlighting key learning coming out of ASSIST-supported activities • Elicit and search out relevant content from ASSIST partners, other USAID cooperating agencies, and other technical organizations, including case studies • Conduct webinars and discussion forums, including partnering with other organizations to house such activities on other websites		x
3. Document improvement knowledge and learning from activities supported by the USAID ASSIST Project	• Support country and technical teams to define key learning questions, develop systems to document and synthesize that learning as knowledge products, and make it available to others • Support country and HQ teams in applying KM approaches to connect implementers and generate and document key learning from improvement activities • Support country and HQ teams in integrating gender considerations in the planning and implementation of improvement activities • Support ASSIST country teams in making knowledge products available locally and creating local knowledge repositories		x
4. Promote the use of improvement knowledge through the ASSIST KM system	• Exploit social media channels to promote ASSIST knowledge products and the application of improvement approaches • Develop communities of practice on the ASSIST web portal • Disseminate resources from the ASSIST web portal through direct email, the project's listservs, conferences, and content posted on other websites		x

Activity 1. Continuously refine the KM strategy for ASSIST

KEY ACCOMPLISHMENTS

- **Research to measure the added value of KM methods to spread learning from improvement.** To evaluate the effectiveness of ASSIST knowledge management activities, we proposed to USAID Uganda a research study to measure the added value and costs of applying deliberate KM strategies as part of the scale-up of improvements in safe male circumcision (SMC) care to new facilities and districts. The study, which was approved by the Makerere Institutional Review Board in June and authorized by the National Research Council in early

August, compares improvements in SMC care quality in spread sites that were randomly assigned to three groups that will be exposed to knowledge transfer strategies of varying intensity. Through such evaluative research, we expect to measure the cost-effectiveness of knowledge management strategies in the Ugandan health sector. Baseline data collection started in late August with observations of SMC service delivery in 15 facilities and was completed in October. In December, all 15 sites will receive a package of knowledge products designed to guide facilities on how to improve SMC services, to be followed by a handover meeting with 10 of the 15 sites and subsequent coaching visits to 5 sites.

- **Market research on "health care improvement knowledge" completed in Uganda:** In March, Johns Hopkins University Center for Communication Programs (JHU-CCP's) Uganda office began conducting structured interviews with ministry and implementing partner representatives for preferences and interest in formats and topics for improvement knowledge in Uganda. The qualitative study (total respondents=25) looked at: (1) current information needs in health care and OVC improvement knowledge tailored to Uganda, (2) design, format and delivery preferences for print and digital resources, (3) access to print and digital health resources, (4) needs for knowledge exchange forums, and (5) existing knowledge management capacity, resources, and tools in order to identify gaps. The JHU-CCP team presented preliminary findings to ASSIST Uganda in August and presented the full report in September. A presentation to the Ministry of Health is planned for November. Study recommendations include leveraging mobile phones to disseminate improvement knowledge, developing eLearning courses, improving the existing MOH knowledge portal, and developing more paper-based materials.

Activity 2. Manage a knowledge portal for improvement evidence and information

KEY ACCOMPLISHMENTS

- **Launch of the ASSIST knowledge portal.** With support from JHU CCP in Baltimore, the ASSIST web portal went live on March 18, 2014 with many new features not found on the HCI Portal. The ASSIST Blogs offer a less formal platform for sharing insights and key learning about improving care and systems than publications. The Events section gives us a place to highlight national and international events and post materials such as presentation PDFs or handouts from conferences and meetings in which ASSIST staff participate. The Original Research database can be filtered by research method. The Improvement Science section includes new summary descriptions of skills to support improvement and techniques for measuring improvement, coaching/supportive supervision, documenting learning, synthesizing learning, and sharing learning.

  Stronger filtered search capacity: The Resources section offers more possibilities for filtered search of all resources on the site, while the Topics pages highlight all resources, blogs and events related to the focus topics of the site: Community Health; Gender; HIV and AIDS; Family Planning and Reproductive Health, Health Workforce Development, HIV and AIDS, Innovative Technologies, Maternal Newborn and Child Health; Nutrition; and Vulnerable Children and Families. We have also created a French content page to concentrate all French-language resources in one place. All of the publications and improvement reports that formerly were on the HCI website are now available on the ASSIST website. The Improvement Database from the HCI

website has been renamed as a repository of Improvement Stories. A redirect function was put in place on March 20 to redirect anyone going to a URL with hciproject.org to the ASSIST website. The www.hciproject.org site was closed in April 2014..

- **ASSIST web portal developing a strong user base**: In its first three months of operation (April-June 2014), the ASSIST Portal received 8,855 unique visits, with 32% of visits from return users. Table 18 compares usage of the ASSIST portal with usage of the HCI Portal during April-June 2010 (its third quarter of operation) and April-June 2012 (the peak usage period of the HCI Portal). Visits to the ASSIST web portal in its first two quarters of operation were higher than those to the HCI Portal in a similar period. Web analytics on the path users followed to get to pages show that many users went directly to specific resources and blogs, indicating that our strategies of promoting content through social media, listservs and front-page promotion have been effective in driving traffic to highlighted resources. The ASSIST portal also shows a higher percentage of return visits.

Table 18: Comparison of usage of the ASSIST Portal and the HCI Portal

	HCI Portal April-June 2010	HCI Portal April-June 2012	ASSIST Portal April-June 2014	ASSIST Portal July-Sept. 2014
Total visits	5,107	26,803	8,855	8,899
Unique visitors	4,910	20,501	6,153	6,036
Average duration of visits	3:32 minutes	3:06 minutes	3:50 minutes	3:29 minutes
Average page views per visit	2.85 pages/visit	2.29 pages/visit	3.31 pages/visit	2.97 pages/visit
New visitors	76%	73%	68%	65%
Top 10 countries of origin of users	1. United States (2,695 visits) 2. Uganda (364 visits) 3. United Kingdom (284 visits) 4. Kenya (275 visits) 5. India (272 visits) 6. South Africa (225 visits) 7. Canada (172 visits) 8. Philippines (162 visits) 9. Nigeria (102 visits) 10. Ethiopia (102 visits)	1. United States (10,402 visits) 2. United Kingdom (1,124 visits) 3. Uganda (1,065 visits) 4. India (1,025 visits) 5. (not set) (1,016 visits) 6. Kenya (898 visits) 7. Philippines (704 visits) 8. South Africa (697 visits) 9. Nigeria (642 visits) 10. Ethiopia (468 visits)	1. United States (4,247 visits) (48.0%) 2. Uganda (442 visits) (5.0%) 3. India (437 visits) (4.9%) 4. Kenya (306 visits) (3.5%) 5. United Kingdom (289 visits) (3.3%) 6. South Africa (178 visits) (2.0%) 7. Brazil (169 visits) (1.9%) 8. Canada (160 visits) (1.8%) 9. Tanzania (160 visits) (1.8%) 10. Australia (147 visits) (1.7%)	1. United States (4,536 visits) (50.9%) 2. Uganda (607 visits) (6.8%) 3. India (338 visits) (3.8%) 4. Kenya (284 visits) (3.2%) 5. United Kingdom (218 visits) (2.5%) 6. Tanzania (200 visits) (2.3%) 7. South Africa (183 visits) (2.1%) 8. Australia (156 visits) (1.8%) 9. Canada (123 visits) (1.4%) 10. Nigeria (108 visits) (1.2%)

- **Development of a private web platform to support sharing of improvement tools and results in India:** In December, Sidhartha Deka spent two weeks in India working with ASSIST country staff to plan for its first year KM strategy and to plan the design of an internal ASSIST India web-based toolkit that will be a one-stop resource for state-based and district-based staff to access QI-related materials and knowledge products. Based on conversations with Delhi-based technical staff, he identified specific knowledge and communication products to be developed to support the scale-up of improvement work on the RMNCH+A strategy. The private knowledge portal is intended to facilitate the sharing of results and knowledge nuggets for internal learning by the ASSIST India team and counterparts. The platform was created using the K4Health

Project's Toolkits platform. In FY15, this platform will be transferred to the ASSIST web portal in order to create better linkages for learning and easing access to global project resources for ASSIST India staff.

Activity 3. Document improvement knowledge and learning from activities supported by the USAID ASSIST Project

KEY ACCOMPLISHMENTS

- **Strengthened field staff capacity in Tanzania, Kenya, Uganda, Malawi, and India to incorporate KM approaches in their work.** These ASSIST field teams were also supported to identify and develop knowledge products that synthesize key learning from improvement activities**:**
  - In October, Ms. Lani Marquez spent a week in Tanzania to orient ASSIST technical staff to knowledge management concepts and how they apply to their work, particularly in the development of knowledge and communication products that will support the spread of improved care processes for ART/PMTCT, most vulnerable children, home-based care, and community linkages.
  - In November, Ms. Marquez and Ms. Kate Fatta conducted a two-and-a-half-day KM training for the entire 20-person ASSIST country team in Kenya to develop their understanding of knowledge management concepts and techniques and how they apply to their work, including defining learning questions, obtaining and summarizing knowledge from improvement activities, creating knowledge assets and products that present the key learning from improvement activities to guide others, and designing effective knowledge transfer processes.
  - In November, Ms. Marquez spent a week in Uganda, helping the ASSIST team leadership to define the main elements of a strategy for meeting the project's knowledge management and learning objectives, including research and evaluation activities, in response to MOH and USAID priorities. With the respective ASSIST technical teams, she identified specific knowledge and communications products to be developed in the next 4-6 months for the orphans and vulnerable children (OVC), Saving Mothers Giving Life (SMGL), National Quality Improvement Framework (NQIF) roll-out, community linkages, safe male circumcision (SMC), and Partnership for HIV-Free Survival (PHFS) program areas.
  - In December, Ms. Fatta traveled to Malawi to provide the ASSIST staff with KM support. Ms. Fatta assisted the Resident Advisor and Improvement Advisor for NACS to plan an interactive Learning Session that included storytelling, poster presentations, Liberating Structures' 1-2-4-All technique, and a game to reinforce QI principles. Ms. Fatta also discussed opportunities for knowledge nuggets and developing knowledge assets with the team.
  - In December, during his visit to India, Mr. Sidhartha Deka conducted a half-day training session on KM for the six State Improvement Coordinators, two District Improvement Coordinators, and Delhi-based technical staff. The training covered key KM competencies and included a demonstration of the ASSIST India Web Portal and interactive activities such as storytelling.
  - In July, Ms. Fatta worked with Tanzania's KM Specialist Delphina Ntangeki and technical teams to review progress in completing knowledge products. She visited the community linkage activity in Muheza District with Flora Nyagawa and Ms. Ntangeki and assisted in the development of a blog and success story on the work.
- **Supported country and HQ teams to integrate gender considerations in the planning and implementation of improvement activities**: During FY14, Dr. Taroub Faramand of WI-HER LLC provided in-person technical assistance to Georgia, Uganda (three trips), and Tanzania:
  - In **Georgia** (February 10-14, 2014), Dr. Faramand provided technical assistance to integrate gender into the non-communicable diseases (NCD) improvement work. She led a training session on gender integration in NCD improvement at the 8th learning session in Kutaisi and developed recommendations to integrate gender in NCD improvement activities in Georgia.

- Dr. Faramand traveled to **Uganda** March 20-April 5, 2014 to provide gender integration technical support to the ASSIST program. She led four training sessions on gender integration in improvement: one learning session on integrating gender in the SMC project and three coaching sessions on how to integrate gender, identify gender-related barriers, and address challenges in quality improvement. She conducted one coaching session related to the Continuum of Response (COR) at the community level and two sessions related to the Partnership for HIV-Free Survival (PHFS). She also led one technical capacity building discussion about gender integration at the district level with two district health officers. Dr. Faramand also designed one Continuum of Response package of actions based on HIV status and sex and another based on prevention strategies for gender-related barriers to accessing care and treatment. She also designed a male involvement intervention in PHFS. She visited again July 25-30 in conjunction with her travel to Tanzania, to support the Uganda team in their gender integration activities.
- Dr. Faramand traveled to Tanzania (July 15-21) to conduct gender trainings on how to collect and analyze sex-disaggregated data and gender-sensitive indicators and how to conduct gender analysis to identify gender-related gaps. She also build the capacity of ASSIST Tanzania gender focal points Dr. Elizabeth Hizza and Ms. Faridah Mgunda.
- Dr. Faramand traveled to **Uganda** September 8-15 to provide technical support in gender integration to the Uganda team and to demonstrate the ASSIST Project's approach to gender integration to Ms. Niyati Shah, Gender Advisor for USAID's Health, Infectious Disease, and Nutrition (HIDN) Office. Dr. Faramand provided technical support to address gender issues in the OVC program in Busia and traveled to Ivukula and Mofosu to document gender integration scale-up.

- **Support for the design of harvest meetings and development of knowledge products**: M staff provided virtual support to ASSIST teams in Uganda for the refinement of SMC, PHFS, Saving Mothers Giving Lives (SMGL), and community health knowledge products; as well as for the design of harvest meetings for the district health management and AIMGAPS activities in Tanzania. Virtual support was also provided to the ASSIST team in Nigeria for the development of improvement training materials and to the Botswana team to design a learning session using KM techniques.
- **Virtual assistance to Nigeria team to finalize products for August handover**: Ms. Fatta also supported the Nigeria team to finalize a number of knowledge products to complement the National Standards for Improving the Quality of Life of Vulnerable Children. These products include community job aid and booklet, cartoons that illustrate the improvement process, and a community improvement guide and team journal.
- **Provided ongoing gender support to field offices** to collect and analyse sex-disaggregated and gender-sensitive indicators, identify gender-related gaps and issues affecting outcomes, and respond to those gaps. Discussions were held with the following field offices to discuss opportunities for gender integration in their FY15 work plans: Burundi, Cote d'Ivoire, DRC, India, Kenya, Lesotho, Malawi, Mali, Mozambique, Niger, South Africa, Swaziland, Tanzania, Uganda, Ukraine, and Zambia. Table 19 summarizes achievements in gender integration during FY14 by country.

Table 19: Summary of ASSIST Gender Integration Activities in FY14

	Africa
Burundi	**PMTCT:** The team conducted and analyzed the results of a gender-related study on "Factors Associated with HIV Testing among Male Partners of Women in Antenatal Care." The team is also tracking male partner involvement in PMTCT and tested changes to increase male involvement in the PMTCT. *The team is tracking one gender-sensitive indicator.*
Cote d'Ivoire	**PHFS & ART:** The team was unable to collect and analyze sex-disaggregated data due to guidance from PEPFAR not to do so. They will continue to advocate for gender-responsive activities.

	Africa
Kenya	**MNCH:** ASSIST Kenya identified gender-related barriers to ANC and initiated male partner testing, working to involve and educate male partners during couples' visits to ANC clinics. *The team is collecting one gender-sensitive indicator.* **OVC:** The team identified and addressed gender issues including early marriage, female genital mutilation, unequal nutritional access, and late/no birth registration. The team promoted changes to respond to the needs of girls, and educate and sensitize parents, caregivers, community health volunteers, and older children on preventive methods, basic treatment, and referrals to health clinics. *The team is collecting data disaggregated by sex.*
Malawi	**OVC:** The team has integrated gender by collecting and analyzing sex-disaggregated data, and conducting root cause analysis to identify the underlying gender-related gaps in educational performance between girls and boys and has proposed changes to test to overcome the issues. *The team is tracking sex-disaggregated indicators.*
Mali	**MNCH:** The ASSIST Mali team identified an important gender-related barrier related to women's low ANC attendance due to lacking transportation money. To improve access to health services, ASSIST allocated funding to cover transportation fees for women for ANC and delivery in all four sites, and worked with two villages to initiate a social funding program to support ANC and delivery costs for women at health centers.
Mozambique	**PMTCT:** The team identified that the non-participation of male partners affects early testing, enrollment, and retention of pregnant mothers.
Niger	In Niger, the team has identified gender-related issues affecting PPFP uptake and has sensitized health facility teams on gender. *The team is tracking gender-sensitive indicators.*
Swaziland	**TB/HIV:** The team addressed gender-related challenges to strengthen implementation of TB/HIV prevention, care, and treatment. Through collecting and analyzing sex-disaggregated data, the team identified that uptake is lower among males and has designed changes to test to overcome barriers that prevent men from remaining in treatment. The team has also designed innovative community mobilization and health promotion awareness campaigns targeting most at-risk groups, such as young men and elderly women. *The team is tracking both sex- and age-disaggregated indicators.*
Tanzania	**PHFS:** The team has identified lack of male participation as a gap affecting outcomes tested 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. *The team is collecting gender-sensitive indicators.***'** **Community Health:** The team collected sex-disaggregated data and implemented a community system approach to improve testing rates in the community; the gap between females and males testing rates has decreased. *The team is collecting one sex-disaggregated indicator.*
Uganda	**COR (TB/HIV):** The team collected and analyzed sex-disaggregated data, identified that more women than men were being initiated on ART among TB/HIV co-infected clients, and identified gender issues causing this gap. The team has proposed changes to test to increase ART uptake among males. *The team is tracking sex-disaggregated indicators.* **SMC:** The team identified lack of female partner involvement as a barrier affecting outcomes and has worked with implementing partners to create an awareness-raising campaign about the importance of female partner involvement and to

	Africa
	provide education sessions and services tailored to females in addition to male patients. *The team is tracking one gender-sensitive indicator.* **PHFS:** 20+ rural clinics began utilizing the following gender-related interventions: encouraging male partner involvement, involving male community leaders/volunteer health workers, utilizing family support groups, and offering male-focused services. The work is now focused on isolating the effects of gender interventions on increasing retention rates of HIV-positive mothers and their babies. *The team is tracking one gender-sensitive indicator.* **SMGL:** Maternal and perinatal deaths were found to be high due to gender-related issues: Late referral to facilities, lack of financial resources for delivery at a facility, lack of transportation, and decision-making power to access and utilize care being held by the male partner. Sites are tracking male involvement through improved couple counseling and male involvement at maternity and young child/postnatal care clinics. **OVC:** The team identified gender gaps in school re-integration for male and female vulnerable children and have worded to address the issues. The team has identified challenges in economic strengthening efforts, including the potential increase of gender-based violence, among others, and is working on designing strategies to address these issues. *The team is tracking sex-disaggregated indicators.*

	Asia
India	**MNCH:** The team identified gender-related challenges leading to inadequate postpartum detection of early signs of complications. The team proposed changes to address the issue, including engaging and educating family members about warning signs and informing male family members about the importance of ANC and PPFP due to their decision-making power within families. ASSIST India engages male family members when conducting home visits and has implemented a survey to study the effect that family, the community, and gender norms have on Indian community health workers, to inform improvement work in the future.

	Europe and Eurasia
Georgia	**NCD:** The Georgia team integrated gender into the program by collecting and analyzing sex-disaggregated data and identified a gender-related gap in CVD risk factor calculation. The team addressed this challenge and has improved the screening and management of CVD risk factors in primary care. *The team is tracking sex-disaggregated indicators.*
Ukraine	**NCD:** The team implemented a survey to determine the gender-related factors influencing tobacco and alcohol use among pregnant women and girls in September, 2014.

	Latin America
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.

Activity 4. Promote the use of improvement knowledge through the ASSIST KM system

KEY ACCOMPLISHMENTS

- **Launched the ASSIST Facebook page.** In conjunction with the launch of the ASSIST Knowledge Portal, the project's Facebook presence was fully transitioned to its new social media page in on March 17, 2014. Followers of the HCI Facebook page were encouraged to "like" the new page to remain informed of project news, highlights, and opportunities for shared learning. Throughout the year, the main content posted on the ASSIST Facebook page was of the latest blogs and resources posted on the ASSIST Portal. As expected, posts that received the highest percentage of engagement on Facebook were those that contained photographs. For instance, Ms. Joyce Draru's blog on male partner involvement in improving mother-baby pairs in Uganda contained a photo of the health facility team, which generated a higher number of clicks and reach relative to posts that contained web links without photos. In addition, posts related to ASSIST Georgia consistently generated interest. For example, one such post highlighting a visit to ASSIST headquarters by delegates from the Embassy of Georgia and Georgia Ministry of Health reached 663 people, engaged 135 followers, and generated 89 clicks and 41 likes from primarily Georgian followers. This post not only included a photograph from the meeting, but also linked to the ASSIST Georgia Facebook page. This indicates that the post was successful in reaching and engaging its intended audience. How to attain a similarly high level of engagement from other audiences based on the content will be a key focus of social media efforts moving forward. ASSIST's social media coordinator, Ms. Feza Kikaya, also supported the Kenya team to develop and promote an ASSIST Kenya Facebook page.
- **Steady posting of new content and news items on the ASSIST Facebook page continued to build a following**. Interestingly, the ASSIST Facebook page garnered unusual activity in terms of page *likes* in the final quarter of FY14, when the page began the quarter with 406 *likes*. However, from August 18-29, 2014, the page saw a dramatic spike in the number of *likes*; during that short period, the page gained 738 followers, with the largest single-day like count of 227 *likes* on August 24. The page amassed an increasingly higher than normal daily follower count through the end of August, but returned to the usual frequency of gaining new followers in September. As a result of this high volume of *likes*, during the period, the project gained 2,000 new followers, closing the quarter with a total of 2,360 *likes.*

- **Increased engagement on the ASSIST Twitter page:** During the year, the ASSIST Twitter page (@usaidassist) gained many followers as a result of live-tweeting by staff and partners at various meetings, as well as due to the addition of the ASSIST Uganda team to the Twittersphere. The ASSIST Uganda team launched their country-specific Twitter page (@USAID_ASSISTUg) in early January and used it to promote knowledge captured at the Partnership for HIV-Free Survival harvest meeting in February and lessons learned from their gender integration work. ASSIST Twitter contributed to social media engagement surrounding several high-visibility events, including the International AIDS Conference, the Asia Pacific (APAC) Forum, and the Global Symposium on Health Systems Research. Although @usaidassist tweeted staff participation at these conferences, the most effective engagement resulted from live-tweeting from staff attending these conferences. In particular, Dr. M. Rashad Massoud

(@rashadmassoud) and Dr. Tana Wuliji (@tanawuliji) attended all three conferences and contributed substantive tweets that complemented and enhanced those sent from @usaidassist. As of September 30, 2014, the ASSIST Twitter page amassed 813 total followers. During the final quarter of FY14, the @usaidassist Twitter page sustained a consistent level of engagement among its followers. Per metrics provided by the social media management tool SproutSocial, @usaidassist achieved an overall *engagement* score of 58% and an *influence* score of 77% during the period. These scores are reflective of the project's "*tweeting behavior*"; 58% of tweets posted were classified as *conversations*, meaning they included @mentions of and @replies to other twitter accounts. The remaining tweets (42%) were classified as *updates*, or tweets that were sent out to all followers without @mentions or @replies. Of the tweets that were classified as conversations, 20% were to new followers, and 80% were to existing contacts.

- **ASSIST listserv created to provide subscribers with regular updates on the project as a whole and the project's work in specific topic areas**: In June, we sent out weekly emails messages to ASSIST staff and partners and key USAID Washington contacts to inform them of new blog posts. These messages served as a test run for the listserv, which was launched in early July. A page was created on the ASSIST web portal and linked from the home page to allow users to subscribe to monthly ASSIST project updates. Beginning in July, monthly project updates were sent to subscribers to the new ASSIST listserv (subscribe on the website). During the last quarter of FY14, three general project updates, two HIV updates and one update each for MNCH/FP, gender, vulnerable children and families, community health, improvement science and research and evaluation were sent out.
- **Spanish-language webinars and forum engaged newborn care providers in Latin America**: The USAID ASSIST-supported Kangaroo Mother Care (KMC) Community of Practice hosted its first Spanish-language webinar on April 22 entitled "Perspectives on the expansion of Kangaroo Mother Care in Latin America." Dr. Jorge Hermida moderated the webinar, which included a presentation by Dr. Nathalie Charpak of the Kangaroo Mother Care Foundation. Forty eight people from throughout Latin America participated. The KMC Community of Practice managed by ASSIST on the maternoinfantil websitealso hosted a virtual forum in Spanish from June 16-June 24, on experiences in the start-up of KMC activities in hospitals in Latin America. ASSIST Nicaragua Chief of Party Dr. Ivonne Gomez moderated the forum. The 17 participants in the discussion included health practitioners from Bolivia, Colombia, Ecuador, El Salvador, Guatemala, Mexico, Nicaragua, Paraguay and the Dominican Republic. On July 22, the KMC Community of Practice hosted its second Spanish-language webinar entitled "Recent scientific evidence on the advantages of the Kangaroo Mother Care method." Miguel Hinojosa of the Ministry of Public Health in Ecuador facilitated the webinar with Dr. Goldy Mazia of PATH as the guest presenter; 47 health professionals from seven countries participated.

RESEARCH AND EVALUATION

BACKGROUND

Through USAID ASSIST, the research and evaluation (R&E) unit is providing 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. Table 20 lists the 18 studies that the project supported in FY14. The R&E unit is working to disseminate 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.

PROGRAM OVERVIEW

Activities	What are we trying to accomplish?	At what scale?	Improvement Activity	Activity
1. Validation of 25% of improvement indicators	• 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		x
2. Collecting data from control groups for 10% of indicators	• Demonstrate the attributable impact of ASSIST interventions on improvement indicators	Comparison reports on no less than 10% of country-reported indicators		x
3. Evaluating design of improvement activities for lower- and middle-income countries	• Advance learning in improvement science in low and middle income countries	Every ASSIST country program		x
4. Evaluation of methods and approaches for effective design and implementation of scale-up	• Advance global knowledge on scale up of improvement interventions	Selected ASSIST country programs with scale up activities		X
5. Economic analysis of improvement activities	• Advance global learning on comparative advantage and economic efficiency of QI activities	At least one economic analysis (may be basic cost report to full Cost-effectiveness analysis) for every ASSIST country with an improvement program		x
6. Sustaining improvements and institutionalizing the capacity to continuously improve	• 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		x
7. Generating learning from multi-country studies	• Advance knowledge on improvement intervention and how they work in different settings	At least one study that either combines or compares and contrasts improvement interventions and their effects in more than one country		x
8. Capacity building for research and support to country programs	• Build research and data management capacity of HCI staff	Every ASSIST country program		x
9. Disseminate knowledge gained through ASSIST R&E activities	• Contribute to the quality improvement and global health fields	Globally available		x

Table 20: ASSIST research and evaluation studies in FY14

	Country	Study	Research Area	Status	Program Area
1	Burundi	Factors associated with not returning to health centers among pregnant women who tested positive for HIV	Improving care	Protocol drafted. Study planned for FY15	HIV & AIDS
2	Burundi	Factors associated with HIV testing among male partners of pregnant women	Improving care	Analysis and writing	HIV & AIDS
3	Mali	Impact of anemia community collaborative intervention in Mali	Design of improvement activities	Concept paper developed. Study to be conducted in FY15	MNCH
4	Mali	Institutionalization of improvement in Mali	Institutionalization	Planning	MNCH
5	Mali	WHO Safe Birth Checklist implementation study	Design of improvement activities	Concept paper developed. Data collection expected to begin Q1 FY15.	MNCH
6	Swaziland	Validation of new diagnostic technologies for pediatric TB cases	Improving care	Completed data collection	TB
7	Swaziland	Injection safety and waste management practices and related stigma and discrimination in Swaziland: A national assessment, exploratory study, and evaluation	Improving care	Analysis and writing	HIV & AIDS
8	Tanzania	Factors associated with missed appointments among ART clients in Morogoro Region	Improving care	Data collection delayed until FY15	HIV & AIDS
9	Tanzania	A qualitative evaluation of "Assuring Infants and Mothers Get All PMTCT Services" (AIMGAPS)	Design of improvement activities	Analysis and writing	HIV & AIDS
10	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	Analysis and writing. Ongoing data collection in control sites	HIV & AIDS
11	Uganda	Improving the quality of safe male circumcision in Uganda: An evaluation and qualitative exploration	Improving care	Analysis and writing	HIV & AIDS
12	Uganda	Impact of community-based quality improvement on retention and adherence	Design of improvement activities	Delayed until FY15	HIV & AIDS
13	Uganda	Integration of family planning into HIV care: A cost-effectiveness analysis	Design of improvement activities	Planning	HIV & AIDS
14	Uganda	The effectiveness and efficiency of integrated service delivery to HIV-positive mothers and their babies in Uganda	Design and implementation of scale-up	Baseline data collection complete	HIV & AIDS
15	Uganda	Safe male circumcision knowledge management (SMaCKM)	Design and implementation of scale-up	Baseline data collection underway	HIV & AIDS
16	Uganda	Assessing the cost-effectiveness of supporting savings groups to improve OVC	Design of improvement	Concept notes with Uganda mission for	OVC

	Country	Study	Research Area	Status	Program Area
		access to services in Uganda	activities	review and approval	
17	Ukraine	Improving alcohol and tobacco control during pregnancy in Ukraine	Design of improvement activities	Baseline data collected, program underway.	MNCH
18	Multi-Country Africa	Building partnership: Experiences from the Partnerships in Community Child Protection in Africa	Design of improvement activities	Writing	OVC

Activity 1. Validation of 25% of improvement indicators

KEY ACCOMPLISHMENTS

- **(Q4) Worked with the ASSIST India team to develop a protocol for validation of MNCH data and presented the protocol to the URC and Indian IRBs for approval.** Permission has now been obtained and data collection is planned for the coming quarter. Data collection (observation of deliveries) is currently underway.
- **(Q4) Held discussions with the ASSIST Kenya team to develop a similar data validation protocol using observations compared to medical records**. Discussions are preliminary but it is expected that the Kenya team will undertake this more rigorous and formal validation in the coming period. A specific protocol needs to be developed and IRB approval needs to be sought.
- **(Q3) Validation of some indicators collected in the Chronic Care Study in Uganda** is underway. The relationship between CD4 changes and indicators of compliance with appointments and reported adherence to medication protocols is being examined**.**
- **(Q4) Dr. Astou Coly traveled to Burundi to provide technical assistance including:**
  - Provided support for the development of a data quality assessment tool (DQA) to monitor the quality of data collected at the facility level. The tool is currently being pretested and is expected to be used during coaching visits.
  - Plan data collection to meet the project's R&E mandates in Burundi (validation, use of control group, and economic analyses). A prospective controlled study will be conducted during FY15 to meet all three requirements. Intervention sites will be selected from the new spread sites.

Activity 2. Collecting data from control groups for 10% of indicators

KEY ACCOMPLISHMENTS

- **(Q4) Continued ongoing activities in the safe male circumcision knowledge management (SMaCKM) study** in Uganda**.** The KM products to be used in the dissemination of information of improvement activities are currently being developed and will be ready in the coming quarter. This study is running essentially as per schedule. See activity 4 below for more details.
- **Data collection for the Uganda chronic care study was completed (Q3) and is being analysed (Q4)** (see above). This was a controlled study therefore the analysis will involve a comparison between performance indicators from intervention and non-intervention sites. Additional ongoing data collection will occur in control sites.

Activity 3. Evaluating design of improvement activities for lower- and middle-income countries

KEY ACCOMPLISHMENTS

- **(Q4) Began data analysis and writing for a study in Burundi on** "**Factors associated with HIV testing among male partners of pregnant women**". Astou Coly traveled to Burundi to provide technical assistance. She conducted preliminary analysis for the study. A total of 504 women and 360 men (including 360 couples) were interviewed to assess factors associated with male

involvement in maternal and child health services in Burundi. Analysis and study report will be finalized next quarter.

- Increasing male participation has been identified as a potentially critical strategy to enhance PMTCT uptake in PEPFAR countries. A baseline assessment conducted by HCI in 2012 revealed low HIV testing among male partners of pregnant women in Burundi, with only 6% of pregnant women tested for HIV during antenatal care (ANC) reporting that that their partners had also been tested. ASSIST has been asked to provide support for the implementation of an improvement collaborative focused on improving the quality of PMTCT services in four provinces in Burundi. This study seeks to enhance the QI intervention package by identifying factors that promote or inhibit HIV testing among male partners of women seeking antenatal care. Findings will inform the development of a package of best practices to promote male testing, which is seen as a proxy for male participation in PMTCT programs. The following research questions will be addressed:
  - What socio-demographic factors are associated with being tested for HIV among partners of women in ANC?
  - What are the individual and structural factors that are associated with testing among partners of women enrolled in ANC?
  - What are the factors that influence not sharing HIV status among couples?

- **(Q4) Continued writing a manuscript for the baseline analysis of a study on "Injection safety and waste management practices and related stigma and discrimination in Swaziland: A national assessment, exploratory study, and evaluation."**
  - While there is substantial literature in the HIV field on stigma and discrimination from the perspective of people living with HIV, there have been fewer studies globally about health worker experiences providing HIV care, the associated stigma, and its impact on their job satisfaction and engagement in their work. Further, there is little research around injection safety and waste management in Swaziland. This study is using both qualitative and quantitative methods to explore existing practices and policies and issues of stigma and discrimination and to identify opportunities for improvement in injection safety. It will also measure the impact of those improvement efforts. A concurrent transformative strategy will be employed in which baseline data on injection safety and waste management practices and the presence and form of any related stigma and discrimination will be collected to inform the design of an improvement intervention. Endline data, also captured through mixed methods, will provide evidence of change. This study seeks to understand:
    - What type of injection safety and waste management practices and policies exist within facilities in Swaziland?
    - What type of stigma and/or discrimination do health care providers feel or express related to HIV care and treatment and other blood-borne pathogens?
    - How do improvement activities around injection safety effect HIV-related stigma and discrimination?

- **(Q4) Completed data collection for a study of "Increasing diagnosis of childhood TB in Swaziland: Clinical utility and validity sample collection and diagnostic methods among children in Swaziland."** Data analysis will be conducted in November and December 2014, and the R&E unit will provide TA to the ASSIST Swaziland team so that they can participate in the data analysis and take a primary role in the write-up of the results.
  - There is no easy-to-use and accurate diagnostic test for TB in children, and there are difficulties in obtaining bacteriological specimen from non-sputum expectorating children. This study will compare two methods of recovery of sputum from children (mucus extractors and gastric lavage) as diagnostic aids for TB among children. The latter is more invasive while the former requires specialized equipment. The study will also compare three diagnostic technologies against the gold standard of TB sputum culture to determine clinical validity and utility of the tests among children in Swaziland (GeneXpert, Blood mycobacteria TB culture, and urine LAM). Clinical validity refers to the extent or degree to which a test accurately

predicts the risk of an outcome, the accuracy with which a test identifies or predicts a patient's clinical status, accuracy of detection the clinical disease as well the ability of the test to separate patients with different outcomes into separate risk classes (discrimination). Clinical utility refers to the likelihood of a test to improve patient outcomes. Given that the study will compare the results from various methods of analysis of biological samples from children, the statistical analysis will be for sensitivity and specificity compared to the gold standard microscopy with sputum cultures.

- During the 4th quarter, ASSIST submitted a concept note for a study "**Assessing the cost-effectiveness of supporting savings groups to improve OVC access to services in Uganda"** to the USAID Uganda mission for approval.
  - The evidence of the impact of household economic strengthening activities is inconclusive. Studies have found that household wealth is associated with improved outcomes for children in the areas of health, education, and nutrition, while other research suggests that economic strengthening programs may lead to decreased school enrolment, increased child labor, and gender-based violence. ASSIST has been working in 26 communities in Uganda, supporting savings groups to improve household economic status while also promoting children's access to education services. The objective of this activity would be to evaluate this approach in new communities.
    - Are savings groups supported with improvement methods more effective in linking vulnerable children with other essential services (e.g., health and nutrition, education, and birth certificates) compared to savings groups which are not supported with improvement methods?
    - What is the incremental cost-effectiveness of supporting savings groups to improve OVC access to other essential services (health and nutrition, education, psychosocial support, social and legal protection, early childhood development) compared to not intervening through supporting savings groups?
  - A non-randomized controlled design could be applied, either a pre/post or interrupted time series approach. We would also collect qualitative information to explore the process of supporting savings groups. Measures may include referral, follow-through on referral, and individual outcomes.
- **During the 3rd quarter, ASSIST worked on data analysis and writing for study on "The effectiveness and efficiency of applying the chronic care model to clients with HIV in Uganda: A non-randomized controlled evaluation."** During the last period, ASSIST submitted an amendment to the study protocol to the URC and in-country IRBs for approval. This amendment sought approval to continue the study for an additional year and to document outcomes as the intervention is spread to the control sites. The amendment was approved, allowing ongoing data collection in new sites to be part of the study.
  - ASSIST is implementing a follow-on to the chronic care improvement intervention implemented by HCI in Buikwe from October 2010 to October 2012. Under ASSIST, the chronic care model was spread to two neighboring districts, Mityana and Nakaseke in Central Uganda.
  - This is a controlled (pre/post-intervention or interrupted time-series) study using quantitative and qualitative data from a random sample of clients receiving HIV services at any one of the sites participating in the study. The study seeks to answer the following research questions:
    1. Are clients exposed to the chronic care model more likely to remain on treatment and maintained in the continuum of care than clients treated with standard care?
    2. Are clients exposed to the chronic care model more likely to remain adherent with their treatment regimen than clients treated with standard care?
    3. Are providers exposed to the improvement intervention more likely to have access and knowledge of the national treatment guidelines than clinicians not exposed to the intervention?

4. Are client charts more likely to be completed in clinics participating in the improvement intervention than client charts from clinics not exposed to the improvement intervention?
5. Do clients exposed to the chronic care model demonstrate better outcomes than clients treated with standard care?
6. Are clients who receive care in intervention clinics more likely to receive care in a timely manner than those receiving care in clinics in which there is no chronic care intervention?
7. If outcomes are better among clients exposed to the chronic care model compared to those treated with standard care, what is the cost-effectiveness of the chronic care model in this setting?

Quantitative data have been collected primarily from client medical records. The sample size is 370 in each of the control and intervention groups, for a total of 740. A test for the validity of the data will be conducted using client interviews to verify the accuracy of the information appearing in the medical record. CD4 counts will be used as a measure of clinical status. Baseline CD4 tests will be conducted for clients who do not have a documented CD4 taken 30 days before of baseline data collection. As CD4 tests every six months is part of standard care, follow-up CD4 counts will be taken from medical records. Data on wait times will also be collected. Qualitative data will be collected from client and provider interviews.

This study also includes a smaller component focusing on the activation or engagement of clients in the management of their condition. We are following a cohort of clients to assess and document any changes in their ability to self-manage. A smaller cohort of 50 clients from the intervention and control districts (for a total of 100) were randomly selected to participate.

- **(Q3) Began analysis and writing for "A qualitative evaluation of 'Assuring Infants and Mothers Get All PMTCT Services" (AIMGAPS)'"** after completing data collection in the previous period.
  - HCI began collaboration with the Tanzanian Ministry of Health and Social Welfare and EngenderHealth in the Iringa Region to improve uptake, retention, and quality of PMTCT services. Since implementation, improvements were observed in ARV initiation, enrollment of exposed infants, enrollment of mothers of HIV-exposed infants, and confirmatory tests being given to HIV-exposed infants after cessation of breastfeeding. While indicator data suggest improvements in quality, uptake, and retention in PMTCT services, more needs to be understood about how these improvements were achieved. The research questions for the qualitative evaluation are:
    - What are clients and providers perceptions of PMTCT services with respect to quality, uptake, and retention?
    - How do clients experience receiving PMTCT services and providers experience delivering these services?
    - What are the perceptions of and experiences with Option B+ from both provider and client perspectives?
    - Are there differences in provider and clients perceptions and experiences between those sites with facility-only support and those with facility and community-level support?

    Findings from this study are expected to contribute to knowledge of how to improve the quality of PMTCT services and client uptake and retention into care. Under the ASSIST Project, an AIMGAPS implementation toolkit will be produced on how to use quality improvement methods to increase uptake, retention and quality of PMTCT services that can be applied in-country and globally. The toolkit will include improvements observed during implementation; lessons learned and best practices; provider and client educational materials; and findings from the qualitative evaluation and harvest meetings. ASSIST will share the toolkit and case studies with stakeholders in FY15. Materials will also be made available to the global community via the ASSIST web portal. Findings may be submitted to peer-reviewed journals.

- **(Q3) ASSIST completed baseline and qualitative data collection and is working to analyze data for a study on "Improving the quality of safe male circumcision in Uganda: An evaluation and qualitative exploration."**
  - ASSIST is working with 10 implementing partners to improve the quality of voluntary male circumcision services in 30 facilities in Uganda. The goal is to reduce adverse events resulting from the operation, improve adherence to standards for safe male circumcision, and improve follow-up at 48 hours and at 7 days. After the intervention, the 10 implementing partners will then scale up improvements to other facilities that they support.
  - ASSIST has worked with the implementing partners to conduct a facility-level assessment of the 30 facilities using the Safe Male Circumcision Quality Standards Tool, an adaptation of the WHO Male Circumcision Services Quality Assessment Toolkit, which measures compliance with 53 minimum standards for SMC for HIV prevention across seven areas: management systems; supplies, equipment and environment; registration, group education, and IEC; individual counseling and HIV testing for male circumcision clients; male circumcision surgical procedure; monitoring and evaluation; and infection prevention.
  - This study seeks to both evaluate the interventions implemented and to better understand why some SMC clients return to the facility for follow-up care and others do not. This is a pre/post evaluation with an embedded qualitative study.

Activity 4. Evaluation of methods and approaches for effective design and implementation of scale-up

KEY ACCOMPLISHMENTS

- **Began data collection (Q4) the study of Safe Male Circumcision Knowledge Management (SMaCKM)** in Uganda. URC received IRB approval for this study from Makerere University in Uganda and from URC's IRB in the third quarter of FY14.
  - ASSIST is working to spread knowledge about how to improve the quality of safe medical circumcision in Uganda using knowledge management methods. This study, which is being conducted in 15 sites in partnership with JHUCCP, will use a three-armed comparison, with sites randomly assigned to one of the following arms:
    - Provision of written materials
    - Provision of written materials with an in-person handover meeting
    - Provision of written materials with an in-person handover meeting and follow-up coaching from a DHO/IP
  - Using direct observation of circumcision provision, this study will seek to answer:
    - What is change in the quality of service delivered?
    - Which KM approach is more effective in improving care?
    - What is the cost-effectiveness of the different KM approaches?
    - How was KM implemented in the field?
    - What KM approaches do health care providers prefer?
  - Data collection by observations of delivery of care include: pre- and post-op interaction with the patient, the handover meeting, and coaching visits
  - (Q3) ASSIST completed baseline data collection for a study on "The effectiveness and efficiency of integrated service delivery to HIV-positive mothers and their babies in Uganda." ASSIST works in 22 facilities across six districts of Uganda to improve retention of mother-baby pairs in care, attain universal breastfeeding, improve nutrition of mother-baby pairs, and ensure that HIV-exposed infants are protected through ARVs. In 2014, ASSIST 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?

Activity 5. Economic analysis of improvement activities

KEY ACCOMPLISHMENTS

- **(Q4) Preliminary discussions are underway to develop a study to examine the cost-effectiveness of one of the program implementations conducted by the South African team**. Dr. Broughton will be traveling to South Africa in the coming quarter and it is expected that a specific research protocol will be developed for implementation.

Activity 6. Sustaining improvements and institutionalizing the capacity to continuously improve

KEY ACCOMPLISHMENTS

- **(Q4) Held two web-based meetings including all Chiefs of Party and other field staff, one of which was focused on sampling and data analysis competencies among staff** (September 2014). Dr. Broughton presented the session in which issues of data quality were framed with an evaluation example. Data validation and the use of control groups, as mandated by the ASSIST cooperative agreement, were also discussed.
- **(Q4) Drafting of new guidance for sampling in improvement project implementation is currently underway.** Once the guidance is completed, it will be disseminated in the field and consultations with country staff will be done to determine what roles and responsibilities the country staff will take on when it comes to decisions of sampling and when technical support from HQ will be required. This will strengthen the ability for ASSIST teams in country to collect the appropriate amount of data and to analyze and understand it to inform improvement work in the future.

Activity 7. Generating learning from multi-country studies

KEY ACCOMPLISHMENTS

- (Q3) ASSIST prepared a concept note for a multi-country study looking at what health care improvement knowledge and competencies are taught at nursing, medical, and public health schools in sub-Saharan Africa.
- One objective of the USAID ASSIST Project is to support integration of improvement competencies into pre-service education for health professionals. ASSIST plans to establish collaboration among universities in a PEPFAR priority country to develop, test, and implement curricula to build basic improvement competencies. To prepare for this activity, it is of interest to know what improvement competencies are covered in pre-service education curricula, how they are taught, over what period and when, and how student learning is assessed. Such information would enable comparison among countries and identification of curricula models and methods currently in use. ASSIST plans a quantitative, descriptive study of this kind of pre-service education in nursing, medical, and public health schools in private and public educational

institutions in sub-Saharan African countries. We envisage a study that answers the questions:

- What, if any, improvement competencies are covered in the pre-service curricula?
- Is there a course (or more than one) that focuses is on building competency in improving health care delivery and safety? If so, what is its content?
- If there is no such course, are such competencies taught in another part of the pre-service education program (part of an internship) and what is its nature?
- What characteristics of the education provider are associated with whether or not pre-service instruction on quality and safety is provided (e.g., private versus public educational institute, size of the facility, reputation, age, affiliations, country or region in which it is located, cadre trained)?

ASSIST is considering working with partner organizations to conduct this study.

Activity 8. Capacity building for research and support to country programs

KEY ACCOMPLISHMENTS

- **(Q4) Working to develop a new strategy to improve critical data analysis competence among country staff.** A list of monitoring and evaluation has been developed and we are seeking further input on these from the COPs and country teams in terms of how to implement them to ensure that all technical staff have the requisite abilities and what to do to improve the competencies of those who do not have the skills presently. A need has been identified for a systematic approach to identifying the level of competence among country staff, developing competencies when deficits are noted, and maintaining and building on them into the future. Work on this will be ongoing in the coming quarter.
- **(Q4) Dr. Coly traveled to Burundi where she:**
  - Provided support for the development of a data quality assessment tool (DQA) to monitor the quality of data collected at the facility level. The tool is currently being pretested and is expected to be used during coaching visits.
  - Provided input on baseline assessment reports drafted by the Burundi and Niger teams.
  - Planned data collection to meet the project's R&E mandates in Burundi (validation, use of control group, and economic analyses). A prospective controlled study will be conducted during FY15 to meet all three requirements. Intervention sites will be selected from the new spread sites.
  - Discuss other potential studies to be conducted in FY15. The Burundi team is interested in conducting a study to quantify retention in PMTCT programs in Burundi, as very little data are available on this topic. Study design and data collection methods were discussed. The feasibility of this study will be determined by the availability of funds.
- **(Q3) Dr. Edward Broughton continued providing technical support for the situation analysis currently ongoing in Kenya to determine what infrastructure, procedures, and personnel are in place for continuing improvement in the health system.** Data have been collected by the contracted individuals tasked with producing the situation analysis, and data collection has been completed. When the next version of the report is presented, Dr. Broughton will provide further input with the goal of having it answer the fundamental question on the current state of institutionalization of improvement in Kenya at the central and country level. It is anticipated that the situation analysis may lead to a specific study on institutionalization of improvement principles at some point in the future, possible after the next stage of program implementation by ASSIST.

Activity 9. Disseminate knowledge gained through ASSIST R&E activities

KEY ACCOMPLISHMENTS

- **USAID presentation**: (Q4) Dr. Broughton presented on USAID ASSIST Project activities in the area of economic analysis to the Economic Growth, Education, and Environment (E3) Bureau of USAID on September 18, 2014. There will be further involvement of the ASSIST Project in E3 activities including a possible training session in which Dr. Broughton will present on economic analysis of health programs to USAID country teams. Specifics of the involvement and cooperation will be developed in the coming quarter.

- **Addressing gender issues**: (Q4) A gender component has been added to the evaluation of the Brief Physician Intervention study in Ukraine. Some baseline data have been collected for this gender component and further data collection and analysis is expected in the coming quarter.
- **Comparison groups and external validation of indicators** (Q4) Apart from ongoing work in Uganda on the SMaCKM study, finalizing the Chronic Care Study, and completing the Georgia NCD program evaluation with involved control sites, ASSIST has been planning on collecting data in comparison sites in India and Kenya. Specifics on how this will be achieved will be developed in the coming quarter.

5 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. In FY14, ASSIST received five different modifications with additional funding for continuing and new scopes of work throughout the year, presenting a challenge in terms of planning and resourcing the work. This has consequences for the timing and speed by which project activities can be implemented. More serious consequences can happen if an activity goes into closedown mode and is then expected to ramp up. The staffing implications of such erratic timing of funding makes managing the work and paying due diligence to our country staff very difficult in view of the host country labor law requirements we also have to abide by. Moreover, the ASSIST Project and URC have been put in the risky financial position of forward-funding activities in order not to lose momentum of some mission- and core-funded activities and not have to re-start project activities from the beginning if and when funds are made available.

REMEDIES

Please expedite the obligation of funding actions that are pending. Please communicate to the bureaus and missions that delays will result in damage to the technical progress of work as well as relationships with Ministries of Health and partners on the ground.

6 Analysis and Explanation Costs

Costs in the first part of the year were below expectations. However, with the additional obligations starting in February, ASSIST staff were able to strengthen and expand many of the activities. This expansion increased the burn rate to the expected level for a project of this size and complexity. Future programming, though, is already being hampered, as mission funding again has been delayed for many of the countries until the end of the first quarter of FY15.

7 Performance Monitoring Plan

Table 21 summarizes progress through year two (FY14) on key indicators in the ASSIST performance monitoring plan.

Table 21: Progress on USAID ASSIST Project performance monitoring indicators, October 2014

Project Management					
#	Indicator	Baseline	End of Project Target	Progress as of October 2014	Data Source/ Collection methods
1	# of Annual Work Plans submitted on-time to the AOR	0	5	3	Transmission of deliverable to the AOR

Project Management					
2	# of Annual Project Reports submitted on-time to the AOR	0	5	1	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	1	Transmission of deliverable to the AOR
5	# of quarterly financial reports submitted on-time to the AOR	0	20	8	Transmission of deliverable to the AOR
6	# of Semi-annual Performance Monitoring Reports submitted on-time to the AOR	0	10	3	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	Data Source [Benchmark]
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	1	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	3+14=17	[Benchmark: 20 completed by the end of year 3]
5	# of research and evaluation studies	0	4	1	[Benchmark: four completed by the

Documentation and Knowledge Management					
	examining the KM system as a whole or components				end of year three]
6	% of ASSIST country teams with at least one team member with basic competencies in KM and documentation	0	100%	60% (12/20)	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%	45% (9/20)	Country program quarterly and annual reporting; special surveys
8	Average # of knowledge products developed per country	0.6 (9/14) (FY13)	3	(9 + 29 = 38/20) = 1.9	Country program quarterly and annual reporting
9	% of assisted countries with local repository of improvement knowledge	0%	Baseline + 25%	5%	Country program quarterly and annual reporting
10	# of communities of practice supported on the ASSIST knowledge portal	0	3	0	HQ quarterly and annual reporting
11	# of virtual learning events supported by the ASSIST KM system	0	3	4	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	Publication
2	# of assisted countries with national health care improvement policies and strategies	3	Baseline + 5	4	Country program quarterly and annual reporting
3	# presentations given by	NA	25	91	HQ and country

Global Technical Leadership					
	ASSIST staff at global health technical conferences				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% (15/17)	Country Improvement Plan signed
2	% of annual country reports submitted on-time	NA	100%	FY13: 100% (7/7)	Dates of submission of annual country reports to AOR
3	% of annual country reports that examine magnitude and spread rate of improvement	NA	100%	NA	Review of annual country reports
4	% of country-reported indicators externally validated	NA	25% of reported indicators	10%	Country quarterly and annual reporting
5	% of improvement indicators tracked with a QI and non-QI intervention comparison groups	NA	10% of reported indicators	5%	Country quarterly and annual reporting
6	% of countries collecting and analyzing sex-disaggregated data for improvement when relevant	86% (6/7) (FY13)	100%	60% (6/10)*	Country quarterly and annual reporting
7	% of country programs tracking expenditures for the purpose of economic evaluation (integrated into the country plan)	0	80%	30%	Accounting records
8	% of integrated country design plans that address relevant gender-related barriers	43% (3/7)	30%	83% (15/18)	Review of integrated country design plans

NA = Not applicable (deliverable not yet due)

TBD = To be determined]

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

Tel: (301) 654-8338
Fax: (301) 941-8427
www.usaidassist.org