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USAID HEALTH CARE IMPROVEMENT PROJECT TASK ORDER 3

FY14 ANNUAL PROJECT REPORT



Contract Number GHN-I-03-07-00003-00

Performance Period:

October 1, 2013 – September 29, 2014

SEPTEMBER 2014

This annual project report was prepared by University Research Co., LLC for review by the United States Agency for International Development (USAID). The USAID Health Care Improvement Project is made possible by the American people through USAID's Bureau for Global Health.

Front cover (from top):

Improving service delivery for vulnerable children involves working with stakeholders of orphans and vulnerable children programs to ensure that more children are provided support according to their needs. School children in Nigeria. *Photo by Bashir Balogun and URC.*

Celebrating World Heart Day 2013 in Georgia with the **Go Red** campaign and distribution of informational booklets in a recreational park of Tbilisi. The disabled peoples' organizations "Accessible Environment for All" and "Let's Be Friends" joined HCI and the National Center for Disease Control (NCDC) to mark the day. *Photo by Natia Kharibegashvili, NCDC, Tbilisi, Georgia.*

Targeting physician counseling about the risks associated with alcohol and tobacco use during pregnancy has been shown to reduce use of alcohol and tobacco by pregnant women in Ukraine. *Photo by URC.*

A health worker showing mothers how to position infants when breastfeeding during a postnatal health talk, in Iringa region, Tanzania. *Photo by Delphina Ntangeki, URC.*

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DISCLAIMER

The views expressed in this document do not necessarily reflect the views of the United States Agency for International Development or the United States Government.

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Abbreviations

ACS	Acute Coronary Syndrome
ANPPCAN	African Network for the Protection and Prevention of Child Abuse and Neglect
ASSIST	USAID Applying Science to Strengthen and Improve Systems Project
BMI	Body mass index
BP	Blood pressure
BPI	Brief physician intervention
CAD	Coronary artery disease
CHV	Community health volunteer
CI	Confidence interval
COPD	Chronic obstructive pulmonary disease
COR	Contracting Officer’s Representative
CVD	Cardiovascular disease
EB	Evidence-based
FY	Fiscal year
GAMPHA	Georgian American Medical and Public Health Association
HCI	USAID Health Care Improvement Project
HR	Heart rate
HTN	Hypertension
IBESR	Institute of Social Wellbeing and Research (Haiti)
IRB	Institutional Review Board
LTFU	Loss to follow-up
MAP	Medical Assistance Program
MDG	Millennium Development Goal
MOH	Ministry of Health
MoLHSA	Ministry of Labor, Health, and Social Affairs (Georgia)
MONA	Morphine, oxygenation, nitrate, aspirin
MoU	Memorandum of Understanding
NACS	Nutrition Assessment, Counseling, and Support
NCD	Non-communicable disease

NCPHC	National Concept of Primary Health Care (Georgia)
OR	Odds ratio
OVC	Orphans and vulnerable children
PEE	Pre-eclampsia/eclampsia
PEN	Package of Essential Non-communicable
PHCC	Primary Health Care Council
PHFS	Partnership for HIV-Free Survival
PLWHA	People living with HIV and AIDS
PNPEC	Ministry of Health's National HIV Care Program (Cote d'Ivoire)
QI	Quality improvement
REPSSI	Regional Psychosocial Support Initiative for East and Southern Africa
RR	Respiratory rate
RTI	Respiratory tract infection
TO3	HCI Task Order 3
URC	University Research Co., LLC
US	United States
USAID	United States Agency for International Development
VHT	Village Health Team
WG	Working group
WHO	World Health Organization

Executive Summary

University Research Co., LLC (URC) and its subcontractor team completed the fifth and final year of implementation of the USAID Health Care Improvement (HCI) Project Task Order 3 on September 29, 2014 after having been issued a one-year, no-cost extension in September 2013 to allow time for completion of a limited number of clearly defined activities. Task Order 3 was the only active task order under the HCI Indefinite Quantity Contract.

During FY14, HCI provided technical assistance with field support funding through TO3 in four countries: Cote d'Ivoire, Georgia, Haiti, and Nicaragua. HCI assistance in Kenya, Mali, Mozambique, Swaziland, Tanzania, Uganda, and Zambia was supported through core funds from USAID; work in Ukraine was supported with regional funding from the Europe and Eurasia Bureau; and research activities in Cote d'Ivoire, Georgia, and Mali were supported through the project's common agenda funds. In all, HCI worked in 12 countries under TO3 in FY14.

In FY14, the HCI country assistance programs listed above finalized their work carried out under TO3 and closed down. Many of the HCI-funded activities are continuing with funding through the USAID Applying Science to Strengthen and Improve Systems (ASSIST) Project, the five-year cooperative agreement awarded to URC by the Office of Health Systems at the end of FY12.

In addition to technical assistance to country institutions, we completed research and final reports on the comparison studies, a key area in the HCI research program. HCI continued to contribute to the evidence base about health care improvement in peer-reviewed health literature and HCI publications, completing two studies and making preliminary results available for a third study and publishing five articles on HCI work in peer-reviewed journals. The journal articles addressed integration of family planning in post-partum care in Afghanistan; cost-effectiveness of improving health care to people with HIV in Nicaragua; use of job aids to improve facility-based postnatal counseling and care in Benin; improving service uptake and quality of care in integrated maternal health services in Kenya; and provincial-level collaborative improvement in Afghanistan. HCI also published nine technical and research reports in FY14 and completed a life-of-project summarizing the key achievements and learning from HCI.

URC carefully managed the close-out activities for HCI. URC staff involved met regularly to ensure that all activities and deliverables were completed and submitted as required by the HCI contract. During the final quarter of HCI implementation, technical staff were focused on final reports and documenting lessons learned. Similarly, the contracts staff submitted all disposition plans and are awaiting final approval from the USAID for the remaining three requests for Haiti, Zambia, and Mozambique. Subcontracts have been closed out with our partners, including any resolution of rate variances. Finally, URC finance staff reviewed and reconciled all expenses under HCI for accuracy and a final accounting to the US Government.

1 Introduction

This FY14 Annual Project Report for Task Order 3 (TO3) of the USAID Health Care Improvement Project (HCI) summarizes the project’s key activities and results during the fifth and final year of implementation: October 1, 2013 through HCI’s closing date of September 29, 2014.

The report narrative has four sections:

1. Reports on field support-funded country or regional technical assistance (TA) to improve health care
2. Core-funded activities and results that supported USAID’s Global Health strategic objectives
3. Activities carried out under the project’s common agenda functions that benefit multiple countries
4. Achievements against the project’s Performance Tracking Plan, showing progress made toward fulfillment of TO3 objectives and performance targets by the end of the contract.

On September 26, 2013 a contract modification was issued by USAID for a no-cost extension to URC to continue to implement a limited number of activities until September 29, 2014.

As part of our country work planning and reporting, we consider how improvement activities contribute directly and indirectly to reaching the Millennium Development Goals (MDGs), particularly Goals 4–6. Our contributions to MDGs 1, 2, 4, 5, and 6 were highlighted in our annual work plan and quarterly reporting to the Contracting Officer’s Representative (COR). Table 1 summarizes how our field activities in FY14 contributed to attainment of each relevant MDG by country.

Table 1: Contribution of HCI TO3 field activities to the MDGs in FY14

MDG	How HCI country activities contributed to MDG attainment in FY14
MDG 1: Eradicate Extreme Poverty and Hunger	Haiti: Improve standards for orphans and vulnerable children (OVC) services in all areas: food and nutrition, shelter and care, protection, health, psychosocial well-being, education and household economic strengthening Zambia: Increase frequency of nutritional status assessments in HIV patients
MDG 2: Achieve Universal Primary Education	Haiti: Improve standards for OVC services in all areas: food and nutrition, shelter and care, protection, health, psychosocial well-being, education and household economic strengthening
MDG 4: Reduce Child Mortality	Georgia: Strengthen the evidence, cost-effectiveness and identify set of “best-buy,” high-impact pediatric services; ensure access to and use of evidence-based clinical guidelines, protocols and pathways, related to priority high-impact pediatric services Haiti: Improve standards for OVC services in all areas: food and nutrition, shelter and care, protection, health, psychosocial well-being, education and household economic strengthening Mozambique: Reduce mother-to-child transmission of HIV Nicaragua: Reduce neonatal mortality by increasing the competency of medical and nursing students to manage common newborn illnesses and complications
MDG 5: Improve Maternal Health	Georgia: Advocate for integration of priority high-impact “best-buy” medical services for women of reproductive age Nicaragua: Reduce maternal mortality by increasing the competency of medical and nursing students to prevent and manage maternal complications Ukraine: Reduce tobacco and alcohol use in pregnant women and provide family planning counseling

MDG	How HCI country activities contributed to MDG attainment in FY14
MDG 6: Combat HIV and AIDS, Malaria, and Other Diseases	<p>Cote d'Ivoire: Study factors affecting loss-to-follow-up of patients on ART.</p> <p>Haiti: Apply QI methods to improve effectiveness of programs to mitigate the impact of HIV and AIDS on children and families.</p> <p>Mali: Reduce unnecessary and unsafe injections to reduce transmission of blood-borne pathogens</p> <p>Mozambique: Increase retention in care of HIV-positive women and exposed infants</p> <p>Swaziland: Reduce unnecessary and unsafe injections to reduce transmission of blood-borne pathogens</p> <p>Zambia: Increase frequency of nutritional status assessments in HIV patients</p>

2 Country and Regional Technical Assistance

AFRICA

2.1 Cote d'Ivoire

Overview of HCI's Program in FY14

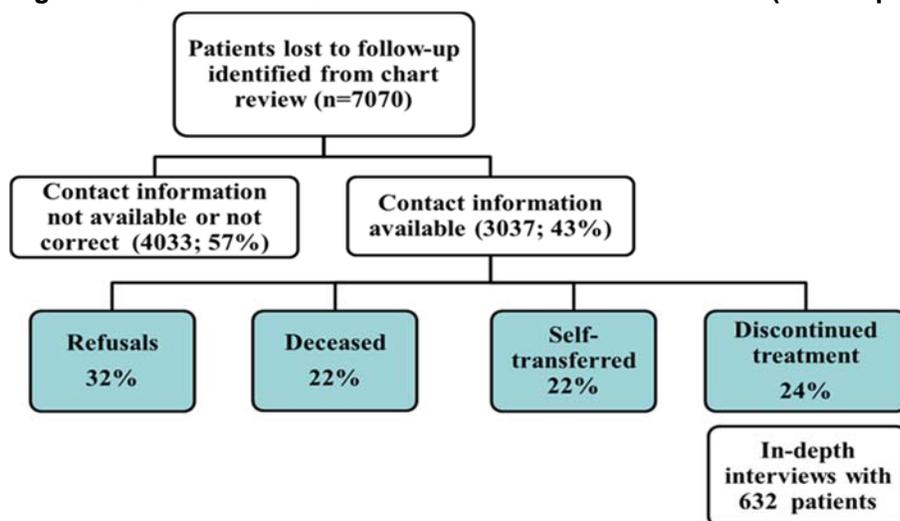
Activity	What are we trying to accomplish?	Geographic scale
I. ART	Conduct a national study to define factors impacting patient lost to follow up	42 health facilities

Main Activities and Results

Activity I: ART

- **Activities and findings from the lost-to-follow-up study:**
 - Community health workers at the facilities reviewed and analyzed results from the loss to follow-up (LTFU) study based on data collected from February to April 2013 (Quarter 1). Figure I describes the outcomes of the medical chart reviews, showing that a sizable number of patients who are being classified as LTFU are actually either receiving care or deceased. A total of 7070 charts of LTFU patients were reviewed in 42 health facilities. A total of 3037 (57%) patients did not have available or correct contact information. Among those for whom contact information was available, 22% died, 22% self-transferred to other facilities, 32% refused to participate in the study, and 24% discontinued treatment, and 632 were interviewed.

Figure 1: Cote d'Ivoire: Outcomes of Medical Chart Reviews (Feb – April 2013)



- Tables 2 and 3 summarize findings of the univariate logistic regression analyses adjusting for matching variables. Factors listed are those associated with increased odds of LTFU status (Odds Ratio [OR]>1 and p value<0.05).

Table 2: Cote d'Ivoire: Personal, socio-economic, social and psychosocial factors associated with loss to follow-up status in univariate logistic regression* (Feb – April 2013)

Personal	Socioeconomic	Social and Psychosocial
<ul style="list-style-type: none"> • Unmarried • Low HIV /ARV knowledge • Erroneous beliefs about HIV/ARV • Smoker 	<ul style="list-style-type: none"> • Low income • Perception of social class as poor • Transportation problems • Social and professional commitments 	<ul style="list-style-type: none"> • Lack of social support • Non-disclosure of HIV status • Internalized stigma

* OR>1 and p value<0.05; regression adjusted for matching variables

Table 3: Cote d'Ivoire: Health care, clinical and other factors associated with loss to follow-up status in univariate logistic regression* (Feb – April 2013)

Health Care System	Clinical	Other Factors
<ul style="list-style-type: none"> • Long wait times • Perceived unavailability of providers • Inconvenient appointment times • Perceived low quality of care <ul style="list-style-type: none"> – Has not received enough information on HIV – Was not well prepared by staff prior to ARV – Not enough psychosocial support or adherence counseling • Poor relationship with facility staff • Lack of satisfaction with services received • ARV stock-outs at facility 	<ul style="list-style-type: none"> • Baseline WHO stage II (compared to I) • No weight gain at 6 month • No CD4 count gain at 6 month • No perceived improvement in health • Side effects 	<ul style="list-style-type: none"> • Use of alternate medicine during treatment • Occasionally missed appointments during treatment • Not member of PLWHA association

* OR>1 and p value<0.05; regression adjusted for matching variables.

- Personal, socio-economic, psychosocial and social/cultural factors listed in Table 2 were found to be associated with higher odds of discontinuing ARV treatment. For instance, patients with low income and those who perceive their social class as poor are approximately twice as likely

to discontinue their treatment compared to those with more income and who do not perceive their social class as poor (OR=1.8; 95% confidence interval [CI]: 1.0-3.1). In addition, those who display signs of internalized stigma are approximately 70% (OR=1.7; 95% CI: 1.2-2.5) more likely to be LTFU compared to those who do not.

- Table 3 summarizes findings for health care system, clinical, and other factors. Health care system factors were examined based on the perception of clients. Long wait times, unavailability of providers, and inconvenient appointment times were all associated with increased odds of discontinuing treatment among patients on ARV. Patients who perceived the quality of care received as low were also more likely to discontinue treatment. For instance, patients who believe they did not receive enough psychosocial or adherence counseling were almost 3 times as likely to discontinue care compared to those who believed they received enough support (OR=2.8; 95% CI: 2.1-3.8). Those who were moderately satisfied or satisfied were much less at risk to discontinue care; patients who were not satisfied with care received were 7 times more at risk to discontinue care than those who were satisfied (OR=7.1; 95% CI: 3.5-14.7).
- Clinical factors were also associated with discontinued treatment. For instance, patients who experienced no gain in CD4 count or weight 6 months after ARV initiation or those who felt their health did not improve as a result of ART were more likely to stop attending clinics (OR=1.9; 95% CI: 1.3-2.8).
- The use of other alternative medicines while on treatment was associated with increased odds of discontinuing care. Those who reported such use were 17 times as likely to be lost to follow-up as those who did not (OR=16.7; 95% CI: 6.3-50.0). In addition, patients who were not members of people living with HIV and AIDS (PLWHA) organizations were 2.8 times as likely to discontinue care (OR=2.8; 95% CI: 1.7-4.6).
- Our findings show that patients lost to follow-up can be successfully traced by community health workers working at facilities who are provided calling cards. Programs should include a community component using community health workers with clearly defined roles working to provide linkages with the community. The study also found that erroneous views about HIV and HIV treatment are still prevalent among PLWHA and are associated with discontinuation of treatment. Community health education along with peer educators may be able to address and correct these erroneous beliefs.
- The quality of HIV services as perceived by patients is associated with discontinued treatment in Cote d'Ivoire. Intervention programs should include a quality improvement approach to address facility-level determinants of retention such as long waiting time and clinic hours.
- Finally, our study found that patients who felt they were not well prepared by facility staff, did not receive enough psychosocial support, or were not satisfied with services received were more likely to be lost to follow-up. In addition to strengthening their educational component including information on HIV/AIDS, benefits of ART as well as continuous counseling, programs should emphasize a patient-centered approach to ensure that the needs of the patients are met.
- **The LTFU study report was finalized and disseminated to PEPFAR and implementing partners.** Results of the study were presented to the National HIV Program (PNPEC).
- **Two abstracts were submitted and accepted for poster presentation at the 2014 International AIDS Conference in Melbourne, Australia (July 2014):** “Strategy and costs for tracing ART patients lost to follow-up in Cote d'Ivoire” (Serge Agbo) and “Factors associated with loss to follow-up among ART patients in Cote d'Ivoire” (Astou Coly).
- **One abstract was submitted and accepted for poster presentation at the Third Global Symposium on Health Systems Research in Cape Town, South Africa (October 2014):** Reasons for discontinued clinic attendance: Perspectives from ART patients in Cote d'Ivoire (Astou Coly).

EUROPE AND EURASIA

2.2 Georgia

Overview of HCI's Program in FY14

Activities	What are we trying to accomplish?	Geographic scale
1. Improve quality, consistency and continuity of medical care in Georgia in a demonstration region	<ul style="list-style-type: none"> • 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 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 intervention region 	<p>Demonstration phase is taking place in 4 hospitals (that recently have merged into 3) (out of 40), 4 polyclinics (out of 42) and 13 village doctors (out of 212) in Imereti Region (1 out of 11 regions of Georgia)</p> <p>This region has 699,890 population</p>
2. Improve access and use of evidence based medical information by Georgian physicians and enhanced availability of modern evidence based treatments	<ul style="list-style-type: none"> • 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 practice • Strengthen capacity of professional associations in developing and adapting international guidelines and evidence-based literature to Georgian context 	<p>Dissemination of evidence for priority conditions to all physicians countrywide</p>

Main Activities and Results

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

- **Conducted learning sessions**
 - 7th learning session (Quarter I): The session supported shared learning among intervention facilities, regional and national stakeholders, as well as our partners who signed the Memorandum of Understanding (MoU) with the project outside the collaborative (40 participants in total). The session focused on achieved results and challenges of quality improvement. Ten posters from quality improvement teams of different facilities were presented at the session. Participants were offered group work to assess the quality of management of project priority clinical conditions using routine monitoring measures identify one, the most pressing quality gaps, develop improvement objective and interventions to address selected problem. As part of the spread of HCI project activities outside the collaborative facilities, representatives of Medical Facilities (Clinic “Curatio” and National Family Medicine Training Center) presented their results in initial assessment of quality gaps and quality improvement efforts though testing project tools.

- 8th learning session (Quarter 2): The session supported shared learning among collaborative improvement facilities to summarize the last three months improvement activities, share experiences, teach and learn from each other. Nine posters from quality improvement teams of different facilities were presented at the session. The Georgia HCI team also presented summary evidence updates from the nine national protocols and Draft Hypertension Management Guideline in Adults developed with support of HCI.
- **Continued clinical, quality improvement and other needs-based training and coaching of intervention facilities.**
 - 25 field trips: During the field trips, the HCI project also distributed CDs to all participating collaborative improvement facilities with project resources and tools. These resources include but are not limited to clinical updates, updated national protocols in project priority clinical conditions, change packages, quality measures, chart standardization tools, excel and printable databases for routine quality monitoring.
 - 1,790 provider-hour trainings, including: 238 provider-hours in quality improvement (QI); 444 provider-hours in Cardiovascular Disease (CVD) risk factor screening & modification; 292 provider-hours in Acute Coronary Syndrome (ACS) management; 634 provider-hours in Pediatric Pneumonia/ acute Respiratory Tract Infections (RTI) management; and 182 provider-hours in Asthma/Chronic Obstructive Pulmonary Disease (COPD) management.
- **Diversified training methods and made them as close to quality improvement teams' needs as possible.**
 - Conducted on-the-job training and a workshop on “*Otoscopy in pediatric respiratory tract infections*” for family physicians (Quarter 2). Oto-rhino-laryngologist Eter Pertsuliani at Samtredia Geo-Hospitals, together with project QI coach prof. Ivane Chkhaidze, gave lectures and practical training on indications, execution and interpretation of otoscopy test. Patients with respective conditions were invited in the seminar and received free testing and consultations. This format enabled family doctors to directly apply skills and knowledge received during the training under the direct supervision and receive clinical feedback from highly qualified experts of the field. The seminar was requested and planned by the members of RTI quality improvement teams. Practically all family doctors have otoscopes, but only few of them use it in routine clinical practice due to lack of respective knowledge and skills. At the same time interpretation of otoscopy is essential for adequate diagnosis and treatment of respiratory tract infections. Both patients and participating physicians expressed appreciation of the USAID support to increase the use of otoscopy in routine management of respiratory tract infections.
 - Conducted directly observed consultations at village Orpiri (Tkibuli district) for 10 pediatricians from facilities conducting collaborative improvement activities (Quarter 3). Patients invited to the event were pre-identified by a village doctor as having project priority medical conditions (bronchitis with bronchospasm, pneumonia and pharyngitis). Quality improvement consultant Prof. Chkhaidze assigned three doctors to provide consultation, while others were taking notes. Along with the project staff, physicians and nurses from nearby villages, the Director of the district hospital and training coordinator for Kutaisi Training Center also participated in the event. Dr. Luri Eliashvili, Manager of Tkibuli hospital of “EVEX Medical Corporation” (formerly My Family Clinic) expressed his delight in having witnessed such high quality coaching and promised to persuade EVEX central management to spread the interventions to the hospital and ambulatory he is in charge of and to ensure that the doctors can line up with their colleagues from the project supported improvement collaborative.
- **Conducted sex-disaggregated data analysis and introduced gender-sensitive interventions**

- HCI collected and analyzed sex-disaggregated data using an HCI study titled “Assessment of effectiveness and cost-effectiveness of QI interventions”. The analysis was focused on the medical chart review and patient exit interviews on cardiovascular disease risk factor screening and modification practices from intervention and control ambulatory care facilities. Based on the identified gaps, in FY13 Georgia HCI introduced gender-sensitive interventions to address the gaps in cardiovascular disease behavioral and physiologic risk factor screening between men and women at the facility level. At the different learning sessions, the project highlighted the importance of reducing the existing gender gap in CVD risk factor screening, modify best practices at the population level, and developed specific recommendations to fill the gaps.
- After the baseline measurement, and 18 months of improvement interventions, in FY14 Georgia HCI conducted analysis of end line data of the study to see if gender-specific gaps in CVD risk factor screening and modification practices had been addressed (Tables 4-7).
- Despite important improvements in medical care provider practices (including medical chart documentation) of CVD risk factor screening and modification among males and females, patient exit interviews highlight the need for better education of male patients about the risk of high cholesterol and its treatment in terms of Coronary Artery Disease (Table 7). Gender-specific interventions that will be implemented under Georgia ASSIST will specifically focus on addressing remaining gaps.

Table 4: Georgia: Sex-disaggregated results of smoking status and smoking cessation (April 2012 – Oct 2013)

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

Table 5: Georgia: Sex-disaggregated results of prevalence, screening and treatment of hypertension (April 2012 – Oct 2013)

Data source	Indicators		Intervention Baseline (April 2012)	Intervention End line (Oct 2013)	Difference
Chart reviews	Blood pressure measured at last visit	Female	91% (58/64)	100% (58/58)	9
		Male	100% (66/66)	100% (75/75)	0
	% charts of patients with BP ≥(or history of HTN) ever started or continued on an antihypertensive medication	Female	86% (48/56)	99% (66/67)	13
		Male	87% (40/46)	98% (47/48)	11
		Male	91% (39/43)	89% (47/53)	-2

Patients Interviews	Doctor measured blood pressure during last visit	Female	89% (87/98)	93% (87/94)	4
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Table 6: Georgia: Sex-disaggregated results of unhealthy eating, lack of physical exercise and excess weight (April 2012 – Oct 2013)

Data source	Indicators		Intervention Baseline (April 2012)	Intervention End line (Oct. 2013)	Difference
Chart reviews	Physical activity status last year	Female	2% (1/66)	99% (74/75)	97
		Male	3% (2/64)	100% (58/58)	97
	Physical activity counseling last year	Female	3% (2/66)	99% (74/75)	96
		Male	8% (5/64)	98% (57/58)	90
	Documentation of nutrition and physical activity counseling during last 12 months	Female	2% (1/66)	99% (74/75)	97
		Male	3% (2/64)	100% (58/58)	97
Patients Interviews	Ever been asked about physical activity status by doctor	Male	33% (14/43)	60% (32/53)	27
		Female	36% (35/98)	50% (47/94)	14
	Received dietary & physical activity counseling from provider during last 12 month	Male	7% (3/43)	25% (13/53)	18
		Female	2% (2/98)	24% (23/94)	22

Table 7: Georgia: Sex-disaggregated results of prevalence, screening and treatment of dyslipidemia (April 2012 – Oct 2013)

Data source	Indicator		Intervention Baseline (April 2012)	Intervention End line (Oct 2013)	Difference
Chart reviews	Statin prescribed in case of CAD diagnosis	Female	17% (7/41)	90% (26/29)	73
		Male	16% (6/38)	79% (23/29)	63
Patients interviews	Cholesterol measured within last 5 years	Male	23% (10/43)	38% (20/53)	15
		Female	22% (22/98)	34% (32/94)	12
	Never heard of cholesterol test	Male	23% (10/43)	0% (0/53)	-23
		Female	16% (16/98)	1% (1/94)	-15
	Does not know whether or not high blood cholesterol influences person's CVD risk	Male	67% (29/43)	32% (17/53)	-35
		Female	54% (53/98)	19% (18/94)	-35

- **Improved access to medicines and technologies:** The project worked on all levels to assess gaps in medicines and technologies and advocate for their improvement. Accomplishments included: Facility/corporation level:

- The baseline assessment showed critical gap in essential inputs needed to manage chronic respiratory diseases at hospital as well as ambulatory levels. Only one out of five facilities had spirometer, simple equipment that helps to diagnose disease and assess effectiveness of treatment. The hospitals also lacked nebulized bronchodilators, first-line treatment for asthma and Chronic Obstructive Pulmonary Disease. Based on the recommendation of the Georgia HCI project, one medical corporation purchased spirometers and bronchodilator solutions for nebulizers for the Samtredia hospital and ambulatory supported by the project. This change in infrastructure was the first starting point for collaborative facilities to show dramatic improvement in the management of chronic respiratory pulmonary diseases.
- National level (Regulatory tools):
 - Upon request from the Ministry of Labor, Health, and Social Affairs (MoLHSA), the Georgia HCI team also developed a document on essential elements and measures for hospital management of acute myocardial infarction, adult asthma/COPD, child asthma and pneumonia. This document included recommendations on essential inputs (equipment, laboratory capacity, medicines) to provide priority “best-buy” high impact evidence-based services. It was shared with ambulatory facilities, hospital executives and insurance companies, that own medical facilities and is being considered to be implemented by medical care facilities and corporations.
 - Upon agreement with Director of the Health Department of the MoLHSA, HCI reviewed the list of medications adopted by decree by the Minister of MoLHSA under the publicly funded Medical Assistance Program (MAP). This list is the basis for reimbursement at the ambulatory level for the program beneficiaries. The list is intended to be used in other publicly funded health programs (e.g., universal health care program, public programs covering outpatient medications for children under 5 and adults over 65). HCI reviewed the list of medications in light with high impact cost-effective interventions, nationally adopted evidence-based practices and international evidence. Specifically, the Georgia HCI team analyzed the content of the list in light of the: a) WHO essential list of medications; b) WHO Package of Essential Non-communicable (PEN) Disease Interventions for Primary Health Care in Low-Resource Settings; c) 22 national and international guidelines for the most prevalent diseases in Georgia and d) other sources of evidence. As the result of analysis, HCI recommended inclusion of statins, oral antibiotics, oral steroids and oral hypoglycemic agents into the list. From a cost-effectiveness perspective, Georgia also recommended the exclusion of non-essential and non-evidence-based medications (probiotics, antihistamines, and potassium medications) and replacing some medications from the list with less expensive analogs.
 - To help plan and implement essential evidence based non-communicable disease (NCD) interventions, HCI adapted and sent to the MoLHSA translated WHO PEN Disease Interventions for Primary Health Care in Low-Resource Settings. The project hopes that reviewed list of medications will improve financial access to evidence-based medications for poor and vulnerable populations, will support doctors’ evidence-based prescribing behavior, and will lead to better health outcomes.
- State program planning level:
 - The project uses representative membership in Primary Health Care Council at MoLHSA (Chief of Party, Dr. Tamar Chitashvili is a member of the council) to advocate for evidence-based revisions of state program benefit packages. As a result of this advocacy:
 - Starting in September 2012 lipid measurement for persons older than 65 and oral antibiotics for children under 5 have become covered by publicly funded programs by decree of MoLHSA.
 - Starting in July 2013 cholesterol, blood lipids, creatinine, and liver enzymes necessary to predict the risk of possible complications as well as assure safety of regular medications

are included in the program and these services are universally accessible throughout the country.

- Upon request of the MoLHSA the HCI team reviewed the State Diabetes Program for its relevance with current evidence-based guidelines (including PEN WHO) and cost-effectiveness of covered services. To support improved access to high-impact, cost-effective CVD prevention services and medications, HCI provided recommendations on the benefit package (e.g., recommended inclusion of oral hypoglycemic agents in publicly funded schemes). To support functional integration of diabetes screening and management services into routine primary care and avoid duplications, the project also recommended to integrate the vertical diabetes program into the Universal Health Care Program, developed a monitoring and evaluation framework of the program and provided cost estimations for the new benefit package (based on the available statistics, clinical, administrative data and population surveys).
- To increase financial access to cost-effective high impact diagnostic, treatment services and medications for primary and secondary prevention of CVD, the project developed program alternatives to cover diagnostic services and antihypertensive medications to all patients diagnosed with hypertension or cover multi-drug therapy only for high risk population (patients having hypertension and CVD risk $\geq 20\%$ or hypertension and diabetes or hypertension and previous myocardial infarction or hypertension and stroke). To support evidence-based decisions, HCI developed alternative benefit packages, cost estimates for each package, strengths, weaknesses, opportunities, and threats analyses, and recommendations. MoLHSA is moving forward to support this initiative: <http://gurianews.com/home/2010-11-26-08-10-05/11326-q-----q.html>.
- **Promoted geographical spread of quality improvement interventions**
 - During Quarter 2 the largest cardiology center in Georgia -- Acad. G. Chapidze Heart Center -- signed a MoU to collaborate and enhance the quality of medical services. This event is the part of the project effort to spread and institutionalize high-impact best quality improvement practices countrywide. Under this initiative, HCI will share quality improvement implementation and evaluation tools with Acad. G. Chapidze Heart Center and will provide minimal technical assistance to the Center to develop, implement and evaluate modern quality improvement practices, enhance effectiveness, and lower the cost of medical care. In response, the Center will share the results of quality improvement interventions with the project, including lessons learned and plans for the future improvements. HCI has also signed an MoU with Georgia's largest medical corporations "My Family Clinic" (network of 40 hospitals in different regions of Georgia), several ambulatory clinics and two professional medical associations (Medical Association for Quality of Health Care and Georgian Family Medicine Association).
 - The signing of these MoUs demonstrates the buy-in of the tools and methods developed by the project and their roll-out beyond the project's original pilot sites. The project hopes that such industry-driven partnerships will support spread and sustained improvement of quality of medical care and contribute to the Government of Georgia's effort to improve health of the Georgian population.
 - To spread best practices outside the collaborative, the HCI team supported providers of the 3rd Children Polyclinic in Kutaisi to conduct a medical conference on "Management of Most Prevalent Pediatric Respiratory Diseases at Primary Care Level – Yesterday, Today, and tomorrow". The conference was conducted in a case study format, i.e. doctors presented clinical cases from their practice on management of pneumonia, bronchitis, croup, pharyngitis, etc. Based on the comparison of their previous and current practices, participants demonstrated progress in improved diagnosis and management of abovementioned high burden pediatric diseases after USAID Georgia HCI Project interventions. The results include dramatic improvement of quality of medical services as well as reduction of treatment costs, associated

with more rational use of medications, particularly antibiotics. The conference was featured by a regional TV channel <http://www.myvideo.ge/?act=dvr&chan=rioni>.

- To spread the modern evidence-based best clinical practices outside of the collaborative and support shared learning to other providers in the Imereti Region, HCI conducted a medical conference in Quarter I FY14 titled: *Rare and Interesting Cases of Pediatric Respiratory Clinical Conditions* at Ambulatory Center of Samtredia Geohospitals. During the conference medical doctors of improvement collaborative facilities of Samtredia presented clinical cases and highlighted visible differences between their own respiratory tract infection (RTI) management practices before and after the project interventions. Providers were proud that nowadays their RTI management practices rely on modern scientific evidence and help patients and facilities to reach best clinical outcomes at the minimal cost.
- Trainings were held on: a) hospital management of COPD exacerbation; and b) initial assessment and treatment of ACS were conducted at newly-opened Kutaisi Training Center on April 24, 2014. Along with providers of facilities conducting collaborative improvement activities, the Evex medical network invited leading professionals from other hospitals all over the Western Georgia (Poti, Batumi, Khobi, Abasha, and Zugdidi). Approximately 40 doctors received project-supported clinical trainings.
- Upon request of the MoLHSA, the HCI team reviewed the draft National Concept of Primary Health Care (NCPHC) (Q3). HCI provided recommendations on the quality improvement section of the NCPHC and developed its monitoring and evaluation framework, assessing six dimensions of quality of primary care services in Georgia. The framework has been included in the draft version of the NCPHC (currently in the process of finalization).
- Shared quality improvement tools and resources with regional representatives of the Primary Health Care Council (PHCC) (starting Q2). To support spread and scale up of quality improvement practices and improved access to evidence-based medical information, the project distributed the hypertension guideline, newly adopted national protocols, change packages, data collection tools and other evidence based medical and quality improvement resources (developed by Georgia HCI) among all regional representatives of PHCC of the MoLHSA. Responding to the request of the Ministry to support the involvement of frontline workers countrywide in the policy dialogue and decision-making around improved quality and access to evidence-based primary health care services, HCI provides a unique opportunity to share quality improvement best practices countrywide through sharing knowledge and improving capacity of PHCC board members (mainly primary care doctors), representing different regions of Georgia.
- **Replicated scale-up of quality improvement in other clinical areas**
 - The sites continue their independent attempts to replicate quality improvement in other clinical areas and use the capacity of Georgian Medical Diaspora to accelerate improvement. Dr. Zaza Katsarava, a professor at Essen University, conducted a training for more than 100 primary care and ambulance physicians on modern management of stroke at Regional Clinical Hospital in Kutaisi. This was the result of ongoing collaboration between the Georgian Medical Diaspora and their Georgian counterparts and collaborative improvement facility driven attempt to replicate successful model of improvement in other clinical areas.
 - 2nd Adult Polyclinic in Kutaisi set the targets and developed indicators to monitor progress in management of diabetic patients. The clinic started also development of patient registry and adapted flowsheet to support generation, collection, analysis and use of high quality data for improving quality of diabetes screening and management.
- **Research & Evaluation.** With the support from the ASSIST and HCI URC headquarters' Research and Evaluation team, HCI Georgia conducted a study to assess the effectiveness, cost-effectiveness and efficiency of the quality improvement interventions in ambulatory and hospital

facilities. Dissemination of the findings through conference presentations and journal articles is being supported through the USAID ASSIST Project. Table 8 shows improved compliance with best practices asthma treatment at ambulatory and hospital levels in intervention facilities compared to the control group, after 18 months (April 2012 – October 2013) of project interventions.

Attributable differences were calculated using differences-in-differences regression analysis in order to assess the changes in occurrence among the intervention and the control sites at baseline and at end line. The attributable difference columns in Table 8 show the results of the regression results, not the simple arithmetic difference between baseline and end line.

Table 8: Georgia: Chart review assessment results of hospital and ambulatory management of asthma: Difference between intervention and control facilities after QI interventions (April 2012 - Oct 2013)

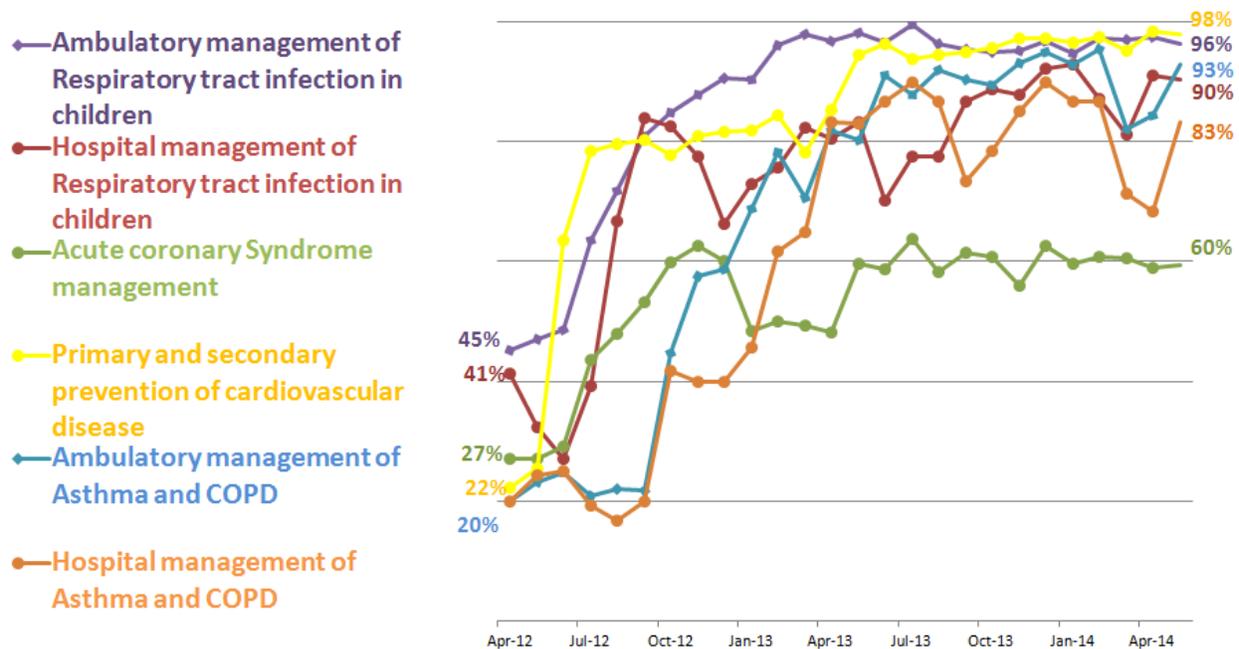
Level of Care	Indicators	Ambulatory		Hospital	
		Attributable Difference	p value	Attributable Difference	p value
Prevention and management of cardiovascular disease	Primary prevention bundle (Aspirin, Statin, blood pressure-lowering drugs) prescribed for patients with high 10-year CVD risk ($\geq 20\%$) or diabetes	+92%	$p < 0.001$		
	Secondary prevention bundle (Aspirin, Beta-blocker, ACE-I/ARB, Statin) after Myocardial Infarction	+73%	$p < 0.001$	+27%	$p < 0.001$
	ACS Initial treatment bundle (Aspirin, Nitrate, Morphine, Oxygen) for patients with Acute Coronary Syndrome			+44%	$p < 0.001$
Management of respiratory tract infections in children	Medical charts with first choice antibiotic	+71%	$p < 0.001$	+33%	$p < 0.001$
	Average number of non-evidence-based (non-EB) medications prescribed	-2.64	$p < 0.001$	-6.12	$p < 0.001$
	Short-acting methylxanthines/euphyllin (non-EB medication)			-67%	$p < 0.001$
	Medical charts with standard discharge/follow-up requirements met	+65%	$p < 0.001$	+31%	$p < 0.001$
Management of chronic respiratory diseases	Classification status documented according to modern criteria	+73.5%	< 0.001		
	Severity of respiratory status recorded			+68.5%	< 0.001
	Status of asthma control is recorded	+91.2%	< 0.001		
	Treatment plan adjusted to severity/control status	+111.6%	< 0.001		
	Average number of nebulizer treatments during first two days of admission			+3.65	< 0.001
	Average number of non-EB Medications prescribed	-1.46	< 0.001	-3	< 0.001
	Risk-factors (body mass index, diet) assessed and modification plan recorded	+44%	< 0.001		
	Triggers (pets, dust, smokers etc.) assessed and modification plan recorded	+95%	< 0.001		
	Smoking status assessed and counseling/treatment provided at last visit	+87.5%	< 0.001	+83%	< 0.001
	Bronchodilator prescription at discharge			+55%	< 0.001
	Prescription of asthma controller medication at discharge			+33%	< 0.001

Level of Care	Indicators	Ambulatory		Hospital	
		Attributable Difference	p value	Attributable Difference	p value
	Fully completed standard discharge form			+52%	<0.001

Note: Positive attributable difference means that the value (% or number) of the indicator increased in the intervention medical facilities compared to the control group.

- Summary Routine Monitoring Results in Improvement of Key Indicators:** Because of the data analysis for “Effectiveness and cost-effectiveness of QI interventions” and activities at the national level, the project technical team had to lessen intensity of coaching visits during the last two quarters of FY14 at collaborative improvement facilities. Despite this fact, after 25 months of implementing quality improvement interventions, routine monitoring show sustained improvement of best care practices **in all project priority clinical areas** from baseline (April 2012) to May 2014.
 - Average compliance with evidence-based best practices on screening, prevention and management of CVD risk-factors, increased by 75% from baseline;
 - Average compliance with Management of Acute Coronary Syndrome best practices improved by 32%;
 - Average compliance with Respiratory Tract Infection management best practices in ambulatories and hospitals of CI facilities improved by 51% and 49% respectively;
 - Average compliance with Asthma and COPD management best practices in ambulatories and hospitals improved on average by 73% and 63% correspondingly (Figure 2).

Figure 2: Georgia: Average compliance with all percentage process indicators per clinical focus area, Imereti (April 2012 – May 2014) (average n= 210 charts reviewed monthly)



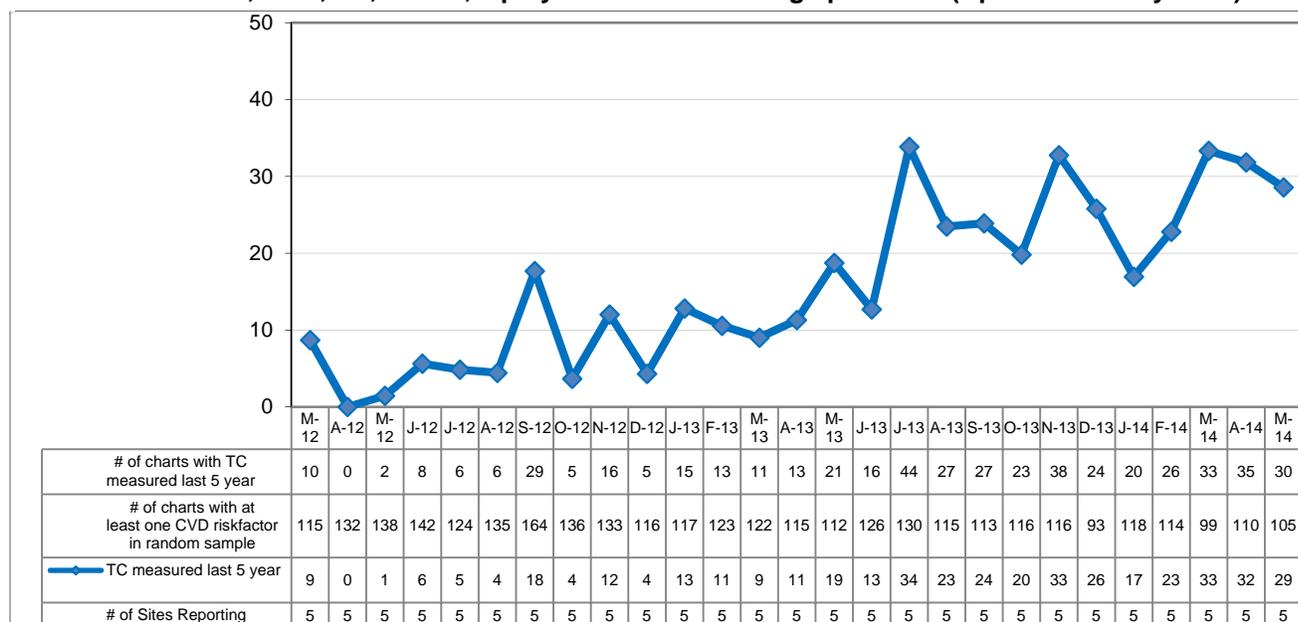
- Primary and Secondary Prevention of Cardiovascular Disease (including CVD risk factor screening & modification):** As shown in Table 9, by May 2014, 11 out of 12 process indicators in CVD risk factor screening and modification reached or remained above 90% compliance.

Table 9: Georgia: Baseline and ongoing compliance to CVD risk-factor screening and modification indicators (March 2012 – May 2012) (average n=100 medical charts reviewed monthly)

Indicator	March 2012	February 2014	May 2014
Current updated list of chronic medications (or documentation of their absence)	0%	95%	99%
Body mass index (BMI) documentation	6%	100%	99%
Counseling on diet and physical activity during last 12 month	6%	100%	100%
Smoking status documentation at last visit	1%	99%	97%
Tobacco cessation intervention (counseling or medication) at last visit if smoker	-	100%	100%
Blood pressure measured at last visit	93%	100%	100%
Anti-hypertension treatment prescribed/adjusted at last visit if hypertension	84%	100%	100%
Cholesterol/lipid measurement during last 5 year if ≥1 CVD risk factor or diabetes, heart failure, MI, PCI	Planning	100%	97%
	Measurement	9%	23%
10-year CVD risk calculated if two or more CVD risk-factors	0%	92%	100%
Primary prevention of CVD: ASA+antihypertensive+statin prescribed if CVD risk ≥20% or diabetes	0%	93%	100%
Secondary prevention of CVD: ASA, B-blocker, ACE-I/ARB, Statin prescribed if CAD	6%	79%	100%

- The only indicator below 50% compliance remains lipid/cholesterol measurement (although 100% of providers prescribed the test). Despite its inclusion in publicly funded ambulatory programs, its utilization countrywide is very low. According to the end-line assessment of the project, total cholesterol measurement in patients with one or more CVD risk factors or already established disease was 6.8% (9/132) at control and 40.9% (54/132) in intervention facilities. This accounts to 31.7% (p<0.001) increase at of the cholesterol measurement at the end line attributable to quality improvement activities in intervention facilities, compared to the control group. Despite this improvement, even at the intervention facilities, compliance with best cholesterol measurement practice remains low and shows significant fluctuations from month to month (Figure 3). This can be explained with the relatively high cost of the test; given capitated reimbursement, weak regulatory and reporting environment, medical facilities try to lower utilization of the costly services to the extent possible. The analyses also show that indicator is lowest in village ambulatory practices. The test is unavailable in village ambulatories and patients are referred to the nearest district/town. Without any formal linkages between these two levels of ambulatory care, the only mechanism for test result to be included in the chart is if patient takes it from the district ambulatory center and brings it on the next visit to his/her village doctor. The project is currently working with the MoLHSA to include cholesterol measurement for eligible patients as one of the quality measure and establish formal requirement for district ambulatories implementing publicly funded Universal Health Care program to inform village primary care doctors about the results of the lab test(s) of village patients.

Figure 3: Georgia: Total cholesterol measurement among patients with one or more CVD risk-factors or diabetes, CAD, HF, stroke, 3 polyclinics and 13 village practices (April 2012 – May 2014)



- Management of Acute Coronary Syndrome (ACS):** Improvement at complex systems of hospital care turned out to be most difficult to influence. Providers are more resistant to changes without formal requirements and their busy schedule, Given completely private hospital market (in a weak regulatory environment) trying to reach maximum efficiency frequently through understaffing medical facilities leaves little (if no) time to care providers for quality improvement meetings and clinical coaching. Despite all above mentioned and lessened intensity of support, management of ACS shows slow but steady improvement (Table 10).

Table 10: Baseline and ongoing compliance with ACS management indicators (April 2012 – May 2014) (average n=50 medical charts reviewed monthly)

Indicators	April 2012	February 2014	May 2014
Initial assessment			
Vital signs documented in 10 minutes at presentation	26%	100%	93%
EKG and interpretation in 10 minutes at presentation	27%	100%	100%
Cardiac enzymes measurement performed according to diagnosis		62%	83%
Documentation of acute pre-hospitalization course	12%	84%	69%
EKG tracking requirements fulfilled according to diagnosis	50%	68%	86%
Severity of early risk documented	0	6%	0%
Initial treatment: MONA (all components documented)	2%	52%	67%
Morphine (Use of adequate pain reliever)	54%	78%	90%
Oxygenation (if pulseoxymetry<95% or not measured)	16%	76%	81%
Nitrate (or contraindication documented)	44%	74%	76%

Indicators	April 2012	February 2014	May 2014
Aspirin (or contraindication documented)	80%	100%	98%
On-going treatment			
Aspirin (or contraindication documented)	74%	98%	95%
Beta-blocker (or contraindication documented)	36%	54%	36%
ACE Inhibitor (or contraindication documented)	55%	59%	62%
Thienopyridines (or contraindication documented)	38%	95%	88%
Discharge planning and discharge			
Lipids measured prior to discharge	-	51%	43%
Screened for tobacco and received tobacco cessation intervention if smoker	-	36%	36%
Standard discharge form fully completed	0	35%	24%
Discharged home with post-myocardial infarction high-impact treatment bundle	9%	18%	12%
Controlled blood pressure at discharge	-	100%	98%

- Evidence based initial treatment, composite of four measures (evidence based pain relief, oxygen if needed, ischemia control and aspirin or contraindications noted), increased by 52% compared to the baseline, but shows slight decrease compared to last quarter. As shown in Table 10, none of these four components show less than 70% compliance with one above 90%. Change of about 30% of the staff of the cardiology department at second largest hospital implementing collaborative improvement activities also contributed to decreased evidence-based pain management (increased use of non-steroid pain relievers (non-EB) instead of opioids). To increase provider capacity of evidence-based initial evaluation and treatment of ACS in participating hospitals, the project team conducted a refresher clinical training for respective providers of all facilities conducting collaborative improvement at Kutaisi Training Center on April 24, 2014. As shown in Figure 4, the composite indicator, as well as its separate components, improved in May 2014.
- Management of Pediatric Respiratory Tract Infections (RTI) at ambulatory level: All indicators assessing management of pediatric RTI at ambulatory level sustained improvements gained during previous months of project implementation. Providers and staff in facilities implementing collaborative improvement activities attribute this success to continuous intensive group and individual training, supportive supervision through medical record review and case study discussions, data collection, monitoring and analysis of progress using routine measurement criteria (Table 11).

Figure 4: Georgia: Evidence-based initial treatment (morphine, oxygen, nitrate, aspirin) of patients with Acute Coronary Syndrome in 3 hospitals, Imereti region (April 2012 – May 2014)

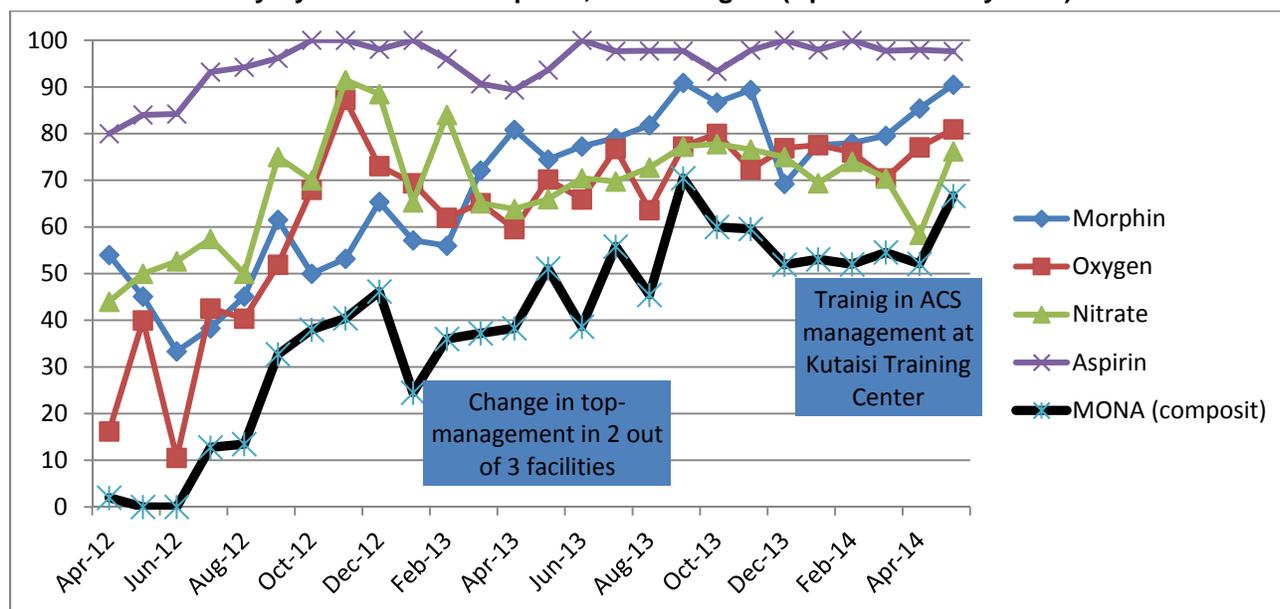


Table 11: Georgia: Baseline and ongoing compliance with best ambulatory management practices of respiratory tract infections in children (April 2012 – May 2014) (average n=100 charts reviewed monthly)

Indicator	April 2012	February 2014	May 2014
% of medical charts of children diagnosed with acute RTI for whom diagnosis is supported by medical chart documentation	37%	100%	100%
% of medical charts of children diagnosed with respiratory tract infection for whom vital signs recorded in medical record	60%	100%	95%
% of medical charts of children treated with antibiotic for RTI for whom chart documentation supports antibiotic use	14%	100%	100%
Average # of antibiotics prescribed for each child treated for RTI with an antibiotic	1.03	1.00	1.00
% of medical charts of children treated with antibiotic for RTI for whom 1st line antibiotic is used	15%	100%	100%
Average # of non-evidence-based medications prescribed per child treated for RTI	0.82	0	0
Proportion of injectable medication in therapy of children treated for RTI in the past month	0	0.04	0.01
% of medical charts of children treated for RTI diagnosis for whom adequate follow up visit/contact is recorded in chart	30%	97%	100%
% of medical charts of children evaluated for RTI referred to hospital if acute illness signs recorded in chart	67%	100%	-
% of medical charts of children treated for RTI diagnosis for whom recommendations, prescription with dosages and their duration documented in the chart	73%	91%	91%
% of medical charts of children treated for pneumonia or asthma counseled for influenza vaccination within the past year	68%	86%	82%

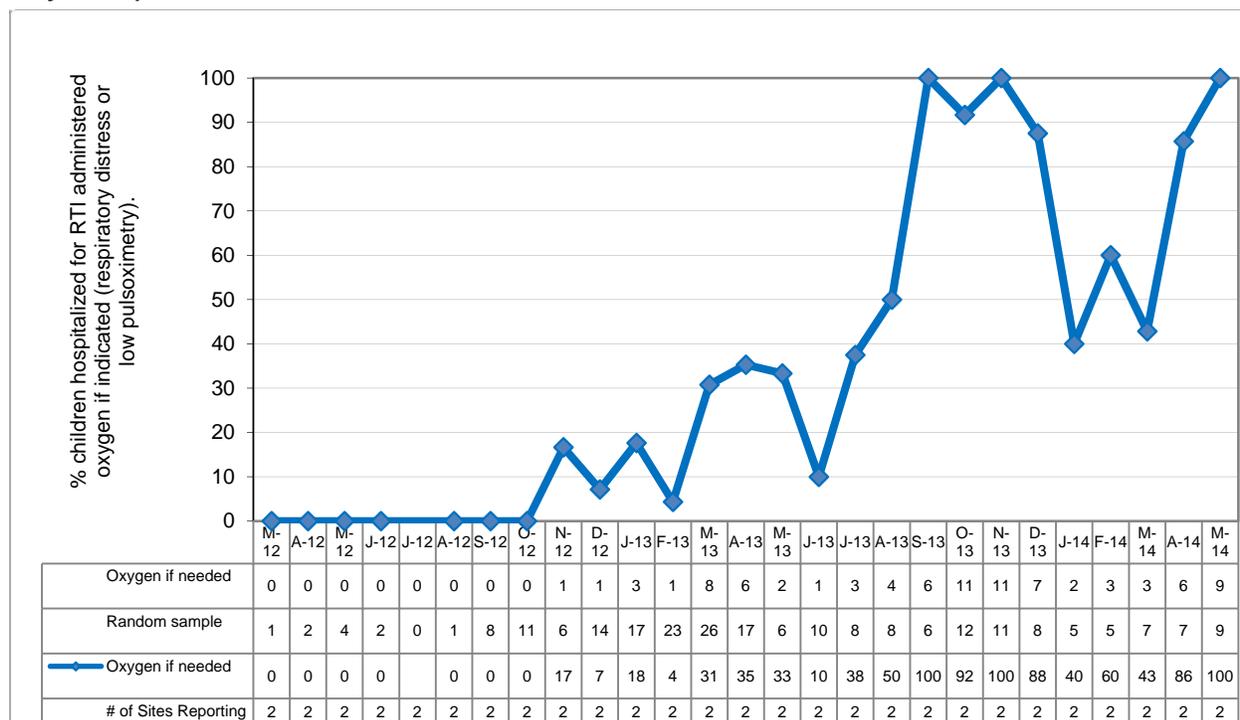
- Hospital Management of Pediatric RTI: Indicators of hospital management of respiratory tract infections also show positive a trend: among seven measures, six indicators reached above 90% (Table 12).

Table 12: Georgia: Baseline and ongoing compliance with best hospital management practices of respiratory tract infections in children (March 2012 – May 2014) (average n=40 medical charts reviewed monthly)

Indicator	March 2012	February 2014	May 2014
% of charts of children hospitalized respiratory tract infection with diagnosis justified by chart documentation	49%	100%	100%
% of charts of children hospitalized for RTI with vital Signs (HR, RR, temp) documented	97%	100%	100%
% of charts of children hospitalized for RTI administered oxygen if indicated (respiratory distress or low pulseoxymetry)	0	60%	100%
% of antibiotic justification in of charts of children treated with antibiotics during RTI hospitalization	47%	100%	100%
% of charts of children hospitalized for RTI treated with evidence-based first-line antibiotic (if antibiotics used)	32%	93%	97%
Average # of antibiotics prescribed for each child treated with antibiotics during RTI hospitalization	1.37	1.21	1.00
Average # of non-evidence-based medications prescribed per RTI hospitalization	5.95	0.03	0
Average number of X-rays per child per RTI hospitalization	0.76	0.83	0.63
% of charts of children hospitalized for RTI for whom unnecessary diagnostic tests ordered	76%	5%	3%
% of charts with standard discharge form fully completed for children hospitalized for RTI	0	50%	50%

- The significant decrease in provision of oxygen therapy during January-March 2014 was due to infrastructure problems, unavailability of children’s pulseoxymeters, and problems with oxygen supply. After successful communication with central management of both corporations the problem with oxygen supply was solved, which enabled providers to administer oxygen to all children with indications (Figure 5).

Figure 5: Georgia: Administration of oxygen if indicated (respiratory distress or low pulseoximetry) in children hospitalized for respiratory tract infection, two hospitals, Imereti Region (March 2012 – May, 2014)



- Ambulatory management of Asthma/COPD:** During the reporting period, all 10 process indicators describing percentage of charts with specific evidence-based best practices reached or remained above 90% compliance (Table 13).

Table 13: Baseline and ongoing compliance with best clinical practices in ambulatory management of asthma and COPD (April 2012 – May 2014) (average n=10 medical charts reviewed monthly)

Indicator	April 2012	February 2014	May 2014
% of charts of patients for asthma/COPD last month, with current updated list of regular medications	0	100%	100%
% of charts of patients seen for asthma/COPD last month, with classification/severity status documented	50%	100%	100%
% of charts of patients seen for asthma last month, for whom status of asthma control is recorded	0	100%	100%
% of charts of patients seen for COPD last month for whom severity of disease is assessed according to validated questionnaire	0	100%	100%
Average number of non-EB medications	4.20	0	0
Treatment plan adjusted to severity/control status	20%	100%	100%
% of charts of patients seen for persistent asthma last month, for whom controller medication is prescribed	100%	100%	100%
% of charts of patients seen for symptomatic COPD last month for whom LABA, anticholinergic or ICS is initiated	50%	100%	100%

Indicator	April 2012	February 2014	May 2014
% of charts of patients seen for asthma/COPD last month, for whom risk factors (BMI, diet) is assessed and modification plan recorded	0	100%	100%
% of charts of patients seen for asthma/COPD last month, for whom triggers (pets, viral infections, dust, smokers at home) is assessed and modification plan is recorded	0	100%	100%
% of charts of patients seen for asthma/COPD last month, for whom smoking status is assessed and counseling/treatment provided	10%	100%	100%
% of patients seen for asthma last month who report good control	0%	25%	50%

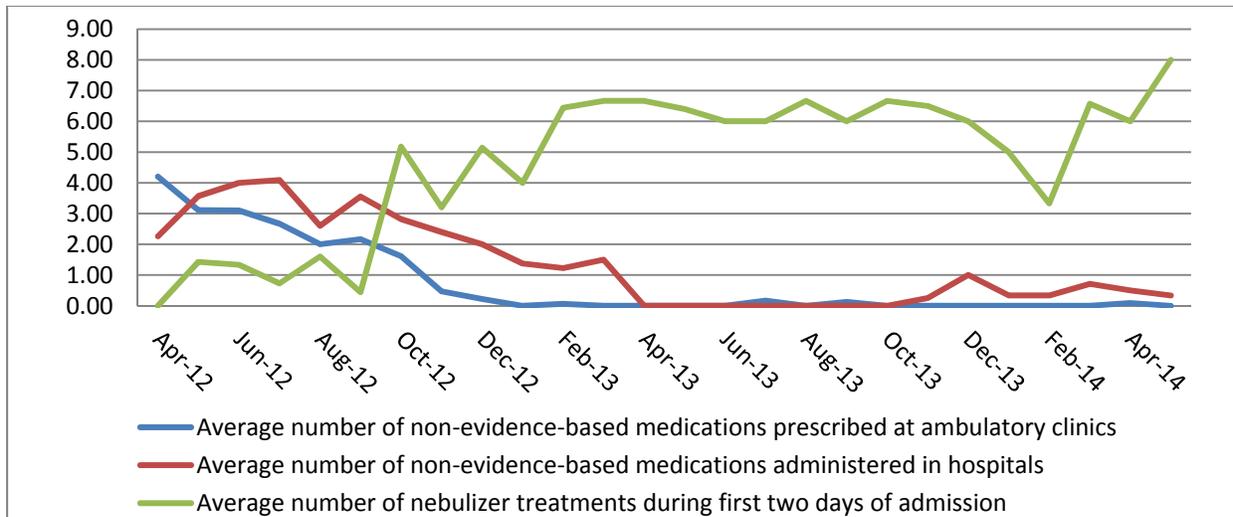
- Hospital management of Asthma/COPD: During the reporting period, all 10 process indicators describing percentage of charts with specific evidence-based best practices reached or remained above 90% compliance (Table 14).

Table 14: Georgia: Baseline and ongoing compliance with best hospital management practices of asthma and COPD exacerbation (April 2012 – May 2014) (average n=5 medical charts reviewed monthly)

Indicator	April 2012	February 2014	May 2014
% of charts of patients discharged for asthma/COPD last month, with HR, BP, RR, temp recorded at admission	50%	100%	100%
% of charts of patients discharged for asthma/COPD last month, with pulseoxymetry measured at admission	0	100%	100%
% of charts of patients discharged for asthma/COPD last month, for whom oxygen is given if indicated	50%	100%	100%
% of charts of patients discharged for asthma/COPD last month, with severity of respiratory status recorded	0	100%	100%
Average number of non-EB medications in patients discharged for asthma/COPD last month	1	0.33	0.33
% of charts of patients discharged for asthma/COPD last month, with oral steroid started at the day of admission	100%	100%	100%
Average number of nebulizer treatments during first two days of admission in patients discharged for asthma/COPD last month	0	3.33	8.00
% of charts of patients discharged for asthma/COPD last month, with spirometry results recorded	0	67%	100%
% of charts of patients discharged for asthma/COPD last month, for whom smoking status is assessed and respective intervention performed	0	100%	100%
% of charts of patients discharged for asthma/COPD last month, for whom bronchodilator was prescribed at discharge	0	67	67
% of charts of patients discharged for asthma/COPD last month, for whom controller was prescribed at discharge	0	67	67
% of charts of patients seen for asthma/COPD last month, with fully completed standard discharge form	0	67	0

In addition to improved compliance with evidence-based asthma and COPD clinical practices, the interventions led to a decreased use of non-evidence-based medications, both in ambulatory and hospital settings, with a parallel increased use of effective nebulizer treatments in hospitals (Figure 6).

Figure 6: Georgia: Prescription/administration of medications during ambulatory and hospital management of asthma and COPD per patient medical chart review (April 2012- May 2014) (average n=20 charts reviewed monthly)



Activity 2. Improve access and use of evidence based medical information by Georgian physicians and enhanced availability of modern evidence based treatments

- **Adapted national protocols and guidelines:** With close involvement of relevant professional associations, the HCI team translated and adapted national protocols in the project’s clinical focus areas. The protocols are intended to standardize diagnostic/treatment interventions at specific levels of care, provide standard audit criteria to evaluate quality of medical services and make evidence-based clinical decisions at each level of health. Final versions of 10 national protocols were approved by the Guideline Council at the MoLHSA. During the reporting period, nine were adopted by ministerial decree.
 - Management of ST Elevation Myocardial Infarction
 - Management of Non-ST Elevation Myocardial Infarction and Unstable Angina
 - Management of Dislipidemia
 - Cardiovascular Disease Risk Detection and Modification
 - Management of Asthma at Ambulatory Level
 - Management of Asthma Exacerbation
 - Management of Chronic Obstructive Pulmonary Disease at Ambulatory Level
 - Management of Chronic Obstructive Pulmonary Disease Exacerbation
 - Spirometry in Clinical Practice
 - Management of Primary Hypertension in Adults
- **To improve access to quality improvement implementation tools countrywide, the project incorporated all quality improvement tools in relevant National Protocols.** These included, but were not limited to job aids, chart standardization tools, change packages, routine monitoring indicators, provider job aids and decision support tools. All job aids had been tested and successfully implemented in project-supported medical facilities of Imereti Region. As a result, these tools are now institutionalized at national level as recommended best practices through the Decrees of the MoLHSA and are available at the MoLHSA website

(http://www.moh.gov.ge/files/01_GEO/jann_sistema/gaidlaini/gaidlain-protokol/135.pdf) and required for nationwide use.

- **After extensive review and series of discussions, the Guideline Council at the MoLHSA approved the hypertension guideline developed with the support of HCI.** The project supported the establishment of the Guideline Development Working Group, comprised of the Georgia HCI project team and key clinical experts of relevant professional medical associations. Based on the most recent and best available international evidence and adapted to the country context, the guideline presents 152 updated recommendations for medical providers on 24 clinical questions that cover practically all aspects of hypertension screening, diagnosis and management (including management of hypertension urgencies and emergencies in hospitals). To enhance provision of the best hypertension screening and management practices to every patient every time, the guideline also consists of job aids, algorithms, pathways, medical chart insert forms and indicators for routine assessment of quality of provided services.
 - To support the guideline implementation, the project also developed a short version of the guideline and the National Protocol on Management of Primary Hypertension in adult patients.
 - In addition, to improve patient education and self-management, the project developed a patient version of the guideline and a patient diary. The entire package, prepared by the working group, was approved by the council and decree of the MoLHSA and will guide hypertension screening and management practices in primary care settings and hospitals throughout Georgia.
- **Reviewed national protocols.** The project uses representative membership in the guideline council of the MoLHSA (Chief of Party, Dr. Tamar Chitashvili is the member of the council) to review presented draft guidelines and protocols in different clinical fields and develop recommendations for better compliance with current up to date evidence. During FY14 about 140 national protocols presented to the guideline council were reviewed on their relevance with current up to date evidence, their potential to improve quality of medical services and ability to monitor their implementation through standard measurement criteria. The project developed relevant recommendations for each protocol which were shared for consideration by the council.
- **Evidence-based medical portal and HCI Georgia Facebook page.** The project continued uploading evidence-based resources on web-page: www.healthquality.ge. To increase awareness about the project, concept and methods of improving healthcare quality, and access to evidence-based medical information, the project runs Facebook page: <http://www.facebook.com/USAIDGeorgiaHealthCareImprovementProject>. Since its creation, the Georgia HCI team posted about 387 (88 during reporting period) evidence updates with relevant links to the original resources on best clinical and quality improvement practices and provided translation of the summary evidence updates in Georgian. Currently the Facebook page has 1,523 “likes” mostly from medical personnel and medical facilities/organizations.
- **Disseminated initial and final results to various audiences:** To spread information on project interventions and results, Georgia HCI conducted a stakeholder workshop at the Georgian American Medical and Public Health Association (GAMPHA) International Conference in June, 2014. The conference brought together State and USAID Mission officials (Mission Director of USAID Georgia, Mr. Stephen M. Haykin, deputy Ministers of Labor, Health and Social Affairs, representatives of National Center of Disease Control and Public Health), more than 300 medical doctors all over the Georgia, representatives of various international organizations, non-governmental and private sector stakeholders supporting health sector reform and programs in Georgia and about 10 Georgian medical Diaspora representatives practicing in the United States, Europe, Germany, Holland and other countries. The CoP and clinical experts of the project presented results of practical implementation of quality improvement initiatives in project priority clinical areas (diagnosis and management of pediatric RTIs, asthma, Chronic Obstructive Pulmonary Disease (COPD), CVD and their cross-cutting behavioral and physiological risk factors) and

discussed about possibilities/strategies to spread and scale up the project best practices. The project also highlighted that the model (and implementation package) of *Internal QI mechanisms* developed within the project can be successfully applied and used in other ambulatory and hospital facilities throughout Georgia to 1) evaluate and promote compliance with evidence-based clinical guidelines and 2) set performance-based contracting for medical facilities participating in publicly funded health programs or private insurance schemes.

- **The project results were also presented on Caucasus Healthcare Infrastructure and Pharma Investment Summit (Tbilisi, June 19-21th, 2014) and 4th International Congress of the Georgian Respiratory Association.** The HCI Chief of Party presented on improving quality as a part and essential tool for results-based budgeting and sustainable public health financing with multiple results from project interventions. During the 4th International Conference, together with national experts and representatives of Georgian Medical Diaspora in US and Europe, the project experts co-chaired various sessions and presented challenges of management of pediatric acute respiratory tract infections in children and chronic respiratory diseases in Georgia and results of quality improvement activities in Imereti Region. They also described the project experiences to improve quality of medical care and reduce cost through implementation of simple, high impact, cost effective interventions consistently for every patient every time, routinely measure the success and support scale up and institutionalization of the best care practices through policy/regulatory/financial tools countrywide. The Congress was widely featured by media: <https://www.youtube.com/watch?v=eObmCaPOvcl>.
- **Dr. Tamar Chitashvili participated at the International Forum on Quality and Safety in Health Care in Paris (2014) to present posters on “Improving Quality of Diagnosis and Management of Cardiovascular diseases and Chronic Respiratory Diseases in Georgia”.** The posters highlight the project results on CVD and Chronic Pulmonary Diseases (Asthma and COPD) management after 18 months of quality improvement interventions in 17 ambulatory centers and 3 hospitals in Georgia’s Imereti Region. Sharing lessons learned from country experience caused interest for international audiences as well.
- **Georgia HCI performance to meet HCI/ASSIST Georgia final targets:** Table 15 describes Georgia HCI project final performance in relevance with the project final targets. As evident from the table below, the project successfully met and even exceeded all established targets.

Table 15: Georgia HCI Project performance toward meeting the HCI/ASSIST project targets (Oct 2011 – May 2014)

Indicator	Target	Georgia HCI Project Final Results
% of HCI project-supported collaborative improvement ambulatories or village solo practices demonstrate improved quality of care	At least 60% of QI teams demonstrate improved quality of care in at least one targeted clinical content area for at least 70% of routine monitoring indicators (measured as at least 25% improvement or at least 70% compliance with best practices)	100% of QI teams ¹ of ambulatory facilities demonstrated improved quality in all targeted clinical content indicators for at least 75% of indicators (measured as at least 25% improvement or at least 70% compliance with best practices) Source: Consolidated routine monitoring data
% of HCI project-supported collaborative improvement	Two out of three hospitals demonstrate improved quality of care in at least one clinical content area for at	All three hospitals reached improvement of at least 86% of process indicators in at least one clinical content area (measured as at

¹ Note: 6-7 village ambulatory practices are considered as one improvement team.

Indicator	Target	Georgia HCI Project Final Results
hospitals demonstrate improved quality of care	least 70% of routine monitoring indicators (measured as at least 25% improvement or at least 70% compliance with best practices)	least 25% improvement or at least 70% compliance with best practices). Source: Consolidated routine monitoring data
Number of medical and para-medical practitioners trained in evidence-based clinical guidelines, including trained in child health (standard indicator from USAID Georgia)	FY2012 target: not specified FY2013 target: 148 FY2014 target: 200	FY2012 actual: 148 FY2013 actual: 240 FY2014 actual: 300 Source: Training registry
% of applicable/eligible physicians who manage targeted priority diseases in project-supported CI facilities have been trained in evidence-based management of priority diseases	At least 80% of physicians from targeted regions trained in modern evidence-based management of diseases, identified as priority	96% of providers report at least one continuous professional development course attended last 12 month Sources: Provider survey, results of cost-effectiveness analysis
Number of continuing professional development modules developed in collaboration with professional medical associations and made available to physicians	At least 10 distinct modules developed in collaboration with professional medical associations and made available to physicians	10 continuing professional development modules developed Source: HCI Project Quarterly Reports
% increase of patients interviewed report to be as involved in their care and treatment decisions as they would like	At least 25% increase or at least 85% of patients interviewed report to be as involved in their care and treatment decisions as they would like	54% (p<0.01) increase of patients interviewed at end line who reported involvement in their treatment decisions as they would like Sources: Patient survey, results of cost-effectiveness analysis)
% increase of patients interviewed report that their doctor explained lifestyle and/or treatment recommendations to them in a way that they could understand.	At least 25% increase or 85% of patients interviewed report that their doctor explained lifestyle and/or treatment recommendations to them in a way that they could understand	75% attributable increase of patients interviewed at end line who reported that their doctor explained lifestyle and/or treatment recommendations to them in a way that they could understand.
CVD Risk Screening: % of charts of patients with at least 2 documented CVD risk factors document a risk estimate for CVD event in next 10 years.	CVD Risk Screening: At least 70% of charts of patients with at least 2 documented CVD risk factors document a risk estimate for CVD event in next 10 years	100% increase (0/6-Apr 2012, 52/52-May 2014) Source: Aggregated routine monitoring data from all project supported ambulatories
CVD Risk Reduction: % of chart with CVD risk estimate \geq 20% in next 10 years or diabetes in which patient initiated/continued on multi-	At least 70% of chart with CVD risk estimate > 20% in next 10 years in which patient initiated/continued on multi-drug treatment (WHO	100% of charts of patients with CVD risk estimate > 20% in next 10 years in which patient initiated/continued on multi-drug treatment (WHO best buy regimen: Aspirin, Statin, BP medication)

Indicator	Target	Georgia HCI Project Final Results
drug treatment (WHO best buy regimen: Aspirin, Statin, BP medication)	best buy regimen: Aspirin, Statin, BP medication)	Source: Aggregated routine monitoring data for ambulatory screening and modification of CVD risk factors
Rational Antibiotic Use: % of medical charts of children treated for Respiratory Tract Infections (RTI) demonstrate rationale antibiotic use (use of an evidence-based antibiotic when antibiotic use is justified)	At least 70% of medical charts of children treated for RTI demonstrate rationale antibiotic use (use of an evidence-based antibiotic when antibiotic use is justified)	100% of medical charts of children treated for RTI demonstrate rational antibiotic use (use of an evidence-based antibiotic when antibiotic use is justified) Source: Aggregated routine monitoring data for ambulatory and hospital management of respiratory tract infections
% decrease in average number of non-evidence based medications prescribed per child with acute RTI diagnosis in intervention ambulatory facilities	At least 50% decrease in average number of non-evidence based medications prescribed per child with acute RTI diagnosis in intervention ambulatory facilities	82% decrease in average number of non-evidence based medications prescribed per child with acute RTI diagnosis in ambulatory facilities
% decrease in average # of non-evidence-based medications prescribed in hospitals per pneumonia hospitalization	At least 300% decrease in Average # of non-evidence-based medications prescribed in hospitals per pneumonia hospitalization	A six fold decrease in average # of non-evidence-based medications prescribed in hospitals per pneumonia hospitalization (5.95- Mar 2012, 0 May 2014) Source: Aggregated routine monitoring data for hospital management of respiratory tract infections
At least 80% of medical providers report access to evidence based medical information (national guideline, international guideline or professional society guideline)	At least 80% of medical providers have access to evidence based medical information (national guideline, international guideline or professional society guideline)	In 94% of intervention and control facilities (16/17) guidelines are freely available for 100% of care providers in clinical care areas (100% availability in intervention facilities (8/8) and 89% availability in control facilities (7/8) Source: Aggregated results of cost-effectiveness analysis from intervention and control facilities
At least 10% improvement in adherence with a minimum of 50% of CVD behavioral and physiologic risk factor screening and modification interventions targeted by the project	At least 10% improvement in adherence with a minimum of 50% of CVD behavioral and physiologic risk factor screening and modification interventions targeted by the project	35% improved adherence with 89% ² of indicators of CVD behavioral and physiologic risk factor screening and modification interventions targeted by the project at both intervention and control facilities ³ Sources: Ambulatory chart review for CVD screening and modification practices, cost-effectiveness analysis

² 8 out of 9 indicators

³ Three indicators were added/modified during project implementation. Because of this reason, baseline data through cost-effectiveness assessment was not collected. Because of this reason, the first available data of relevant routine monitoring results in intervention facilities were used to estimate the baseline data.

2.3 Ukraine

Overview of HCI's Program in FY14

Activities	What are we trying to accomplish?	Geographic scale
1. Training of trainers on an evidence-based brief physician intervention (BPI) for quitting tobacco and alcohol use	<ul style="list-style-type: none"> To secure at minimum 80% of free tobacco and alcohol pregnancies in selected facilities of Poltava oblast To secure at minimum 80% coverage with BPI and family planning counseling of reproductive age women and teenage girls (15-17 years old) 	Oblast: Poltava Facilities: women's consultations, family planning offices, ambulatory polyclinic, (total number 10) Health care providers: (total number 90) Target population: pregnant women (primary) and women of reproductive age (total number 1600) QI teams: 11 Cities in Poltava Oblast: 5 (Poltava, Kremenchuk, Komsomolsk, Mirhorod, Lubny)
2. Training of healthcare 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 for BPI implementation nation-wide		
5. Development of a training curricula on BPI and facilitation of incorporating the curricula into post-graduate medical education in one-two medical education institutions in Ukraine		

Main Activities and Results:

The activities presented below were carried out across two implementation mechanisms: HCI and the USAID ASSIST project. The first phase of the project was being funded by the Europe and Eurasia (E&E) Bureau through HCI. The second phase, which is planned to begin by FY15, is being funded by E&E Bureau through ASSIST. The full scope of work for the complete activity to be carried out by the two projects is included here.

Project implementation was significantly delayed, due to the political situation in the country, and therefore resulted in moving activities that were initially planned under HCI to ASSIST.

- **Conducted preparatory project activities.**
 - On June 11, 2013, the activity was jointly launched by USAID and Ministry of Health (MOH) of Ukraine.
 - On July 18, 2013, the activity received registration from the Ministry of Economic Development and Trade.
 - On October 4th and 7th, 2013 the project team set up a technical meeting and conference in Kyiv jointly with US-based expert Dr. Richard Windsor, USAID representatives, local experts from the Ukrainian MOH and academic institutions, and representatives from participating facilities. In two oblasts to discuss the BPI protocols for reducing alcohol use and smoking cessation, plan for baseline assessment, process of BPI implementation, and evaluation of intervention effectiveness.
 - On October 5th, 2013 an international experts' visit was held in Poltava Oblast to meet the Director of the Oblast Health Care Department and visit women's health care centers participating in the project. During the visit, international experts were introduced to managers of Poltava Health Care Department and were familiarized with the Ukrainian system of primary health care for pregnant women and for women of reproductive age.
 - To accomplish the project aims, according to the main planned activities, four working groups (WG) were established: WG #1 – Clinical practice guideline/Protocol development; WG #2 – Data collection/information technology support; WG #3 – Curriculum for CME; WG #4 –

Implementation Team (at Luhansk and Poltava oblasts). During December 2013, two meetings of WG #2 took place to adapt the proposed by International Project Experts the forms for screening, intervention and follow up visits and WG #4 held an initial meeting to organize the baseline assessment at the regional level in Luhansk oblast. This WG consists of 12 members: chief doctors of 8 participating facilities, representatives from Oblast Health Care Department, chief doctor of Oblast Perinatal Center, chief specialist in Obstetric and Gynecology of Luhansk City, chief doctor of Luhansk City Maternity Hospital, and the project regional coordinator.

- Two project coordinators were hired in Luhansk and Poltava oblasts. The contract with the Luhansk coordinator ended on April 2014 because of political situation and anti-terror operation of Ukraine forces in the eastern area of the country.
- A project flyer, requested by the USAID mission, was finalized in January 2014 and published in two languages.
- **The protocol for “Quality improvement-formative evaluation” was presented to the Scientific Council meeting at the Ukrainian State Institute of Reproduction for Institutional Review Board (IRB) approval in March 2014.** The approval from the Scientific Council means that we may start applying for an IRB approval in the United States. The evaluation will be carried out under the USAID ASSIST Project.
- **Acquired 3rd stage of registration (for diagnostic urine dip-stick for cotinine).**
- **Initiation and implementation of baseline assessment.** The following documents and forms were developed for the baseline assessment:
 - Screening form/first visit
 - Intervention form/second visit
 - Follow-up visit
 - Development of a patient’s informed consent in accordance with the Law of Ukraine, approved by Poltava Health Care Department
 - Guidelines for the doctors on questionnaire filling
 - Project posters for the polyclinic reception desks/registries
 - Survey for doctors on knowledge, attitude and counseling practices on reducing alcohol and tobacco use during pregnancy
 - Survey for pregnant women on their clinics’ counseling practices on reducing alcohol and tobacco use during prenatal care
 - Screening form for women of reproductive age (including point of contraception)
- The baseline assessment was initiated in July 2014 and was completed by early September 2014. The data were collected in paper format and converted into electronic format for analysis. Baseline data analysis will be completed under the USAID ASSIST Project.
- **Completed development of the Implementation Team at Oblast level.** The process has been completed at both administrative and facility levels, with a coordination group at the Poltava Oblast administration level and implementation teams at the facility level established and approved.

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

- **Training of Trainers training conducted in Poltava (July 1 – 3, 2014)** with participating of US trainers/experts R. Windsor and T. Balachova.
 - 12 trainers from national and local levels were identified to participate in theoretical and practical sessions of the training.

- Training materials were developed according to current US and international evidence-based practice in preventing alcohol and tobacco consumption among pregnant and reproductive age women.
- Evaluation forms distributed among participants before and after the training. The evaluation results were included in the US experts' trip reports.
- All developed training materials will be used for adaptation to current Ukraine practice and will be submitted to the curricular of postgraduate training for primary health care specialists working in reproductive health.
- Trained doctors provided training for the improvement teams in pilot polyclinics to BPI technology before the implementation phase starts in September 2014.

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

- **Conducted training for medical providers on the BPI technology before implementation started on August 28th and 29th, 2014.** The overall number of trained doctors/health care providers from the facility improvement teams was 80.
 - Evaluation forms distributed among participants before and after the training.
 - The listed adapted training materials after the Training of Trainers were published and distributed among trainees are: Technology of BPI to decrease tobacco and alcohol consumption by women of reproductive age and pregnant women - methodological recommendation for doctors; workbook for pregnant women to quit smoking and drinking alcohol; workbook for women of reproductive age to quit smoking and drinking alcohol; Standard dose of alcohol – short pocket card; BPI – 5 “A” algorithm for smoking and alcohol quitting – short pocket card; 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 implementation phase starts in September 2014 under the USAID ASSIST Project.

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

- **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.**
- **Based on evidence-based medicine guidelines, the Draft Clinical Protocol of using BPI intervention among specialists on the primary health care level to decrease and quit tobacco and alcohol usage by pregnant women and women of reproductive age was developed, reviewed and sent to the State Expert Center under MOH of Ukraine for approval on September 2014.**

Activity 5. Development of training curricula for BPI and facilitation of incorporating the curricula into post-graduate medical education

- **Draft program for training curricular is to be submitted** based on training program provided by US training experts and according to the Training of Trainers organized on July 1-2, 2014.
- **Academic approval was done** at the Methodological Council of National Medical Academy of Postgraduate Education on September 16, 2014 and at the Academy's Scientific Council on September 17, 2014.

LATIN AMERICA AND THE CARIBBEAN

2.4 Haiti

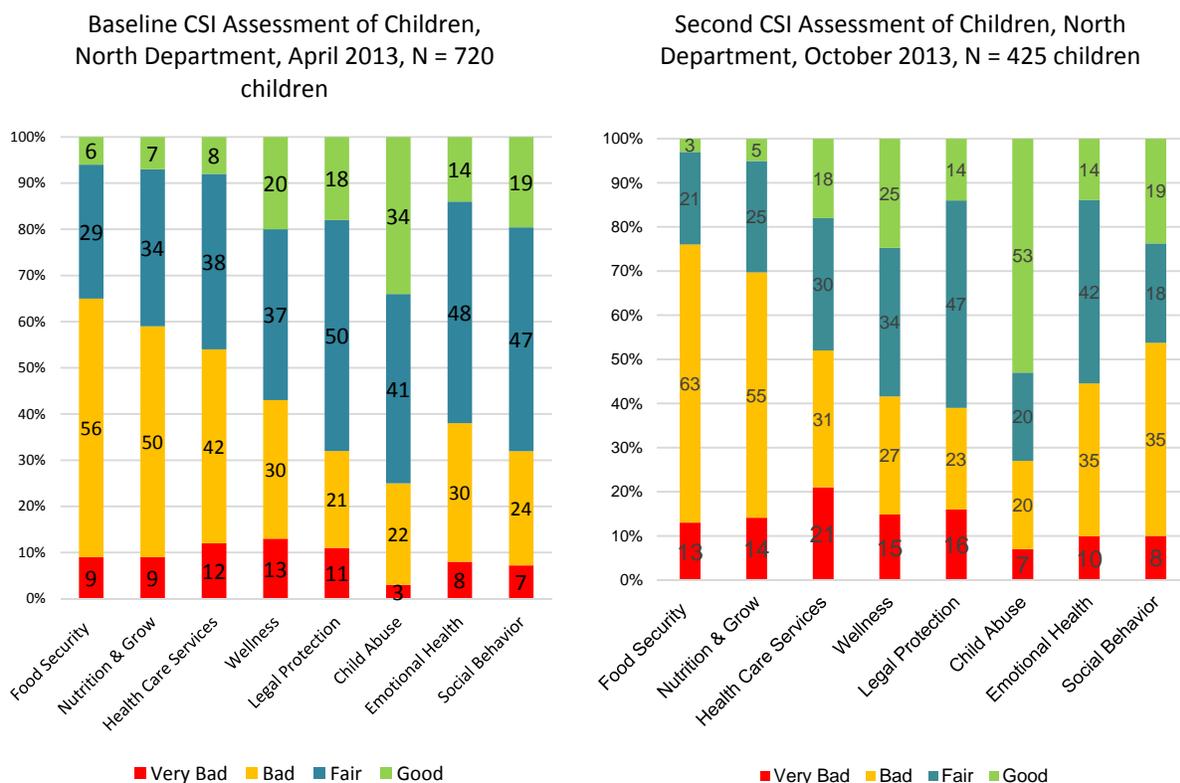
Overview of HCI's Program in FY14

Key activities	What are we trying to accomplish?	Geographic scale
1. Gather and communicate evidence on draft vulnerable children service standards	<ul style="list-style-type: none"> • Hold learning sessions during which stakeholders will share experiences, challenges and lessons learned • Gather evidence that the standards are feasible at the point of service delivery • Gather evidence that implementation of the standards actually makes a difference in children's lives • Gather evidence that implementation of the standards is within the context of organizational practices • Communicate standards across partners • Support stakeholders to share evidence of QI programming on the HCI Portal 	West, Artibonite and North departments
2. National endorsement of the service standards	<ul style="list-style-type: none"> • Results from the piloting will be integrated in the final version to be endorsed by the government of Haiti through the Institute of Social Wellbeing and Research (IBESR) of the Ministry of Social Affairs 	National
3. Disseminate the Standards	<ul style="list-style-type: none"> • Develop a dissemination plan for QI in OVC programs in organizations and regions not reached during the piloting 	National

Activity 1. Gather and communicate evidence on draft VC service standards

- **On October 22-25th, 2013 28 piloting partners attended the national learning session** to share lessons learned and challenges faced during the piloting of standards as well as revise and finalize the national standards for providing services for vulnerable children.
- **Gathered evidence that the standards are feasible at the point of service delivery.**
 - Piloting the standards created an opportunity to show how the service standards are feasible at the point of service delivery. Nine service delivery sites were involved in the piloting the service standards.
 - Service standards allowed site managers to solve difficulties faced in providing OVC services to children and families in the communities.
 - Guidelines were disseminated to communities by field agents.
- **Gathered evidence that implementation of the standards actually makes a difference in children's lives.**
 - Figure 7 shows the comparison of the baseline and the second assessments conducted before the end of the project in the North Department.

Figure 7: Haiti: Baseline and Follow-up Children Assessment in North Department (April 2013, October 2013)



Activity 2. National endorsement of the service standards

- **On November 20, 2013, the endorsed national standards were officially launched during the International Day of the Child.** Children and USAID staff (including the USAID mission Director, the UNICEF director, Drs. Kathleen Hill and Diana Chamrad of URC headquarters, the Minister of Social Affairs, the Director General of IBESR, and stakeholders representatives of Child protection sector in Haiti attended this event.
 - Before endorsing the national guidelines, a work session was held at IBESR office to integrate the recommendation of Child Protection Stakeholders in the Document of the National Guidelines. Once completed, the document was signed by the Minister of Social Affairs and the Director General of IBESR.
 - 100 copies of the standards and a flyer documenting the piloting of the standards were distributed to guests.

Activity 3. Disseminate the standards

- **After national endorsement, on December 12, 2013 HCI met IBESR to discuss and develop jointly a dissemination plan for the standards.** HCI activities in Haiti were wrapped up by December 2013. Activities to disseminate the standards to reach geographical departments that were not included in the piloting phase continued in 2014 under the USAID ASSIST Project.

2.5 Nicaragua

Overview of HCI's Program in FY14

Key activities	What are we trying to accomplish?	Geographic scale
1. Consolidate the teaching package transfer process to the eight universities HCI worked with in FY13	To consolidate the teaching package transfer process to the eight universities	8 of 13 universities in Nicaragua: UNAN Managua, UNAN León, BICU, POLISAL, UPOLI, URACCAN, UCAN and UAM. Student Population: 5,157 Teaching Population: 506 8 QI Teams
2. Complete the second competencies evaluation on the care provided during pregnancy, delivery, and post-partum and to newborns among recently graduated doctors	To improve the health service delivery skills of medical and nursing graduates	
3. Strengthen continuous quality improvement implementation		
4. Review and update available scientific evidence for neonatal and maternal mortality reduction	To update the evidence-based interventions to reduce maternal and neonatal mortality guide	

Main Activities and Results

Activity 1. Consolidate the Teaching Package transfer process to the eight universities HCI worked with in FY 13

- **HCI started visiting universities to verify how many of the teachers linked to the Teaching Package topics were using its methodological designs (Quarter 1).** In addition, HCI assessed the need to adjust the number of hours allocated to each topic since universities review their curricula and schedules at the beginning of each year. In Quarter 2, HCI completed the round of visits reaching seven universities out of the eight USAID/HCI beneficiaries, with the following results:
 - Six out of the seven (86%) universities are using the teaching package methodological designs
 - Six out of the seven (86%) universities have included the family planning, maternal health and child health module contents into their medical and nursing curricula
 - 59 medicine teachers out of 77 (77%) linked to these topics are using the teaching package methodologies
 - 43 out of 43 teachers (100%) linked to the Teaching Package topics are using its teaching methodologies
 - Of the 120 medical and nursing teachers from the seven universities included in the visits, 102 (85%) are using the Teaching Package methodological designs.
 - One of the seven universities (UAM), a private institution receiving technical support from HCI, has not been able to develop teachers' competencies because most of the teachers work part time and do not have the time to be trained on Teaching Package topics and methodologies or to take on the responsibility of their implementation.
- **As of the end of FY14, 15 of the 22 topics in the three MCH modules of the Teaching Package are now included in the study programs of the eight universities receiving HCI's technical assistance.** Teachers are using checklists and clinical cases to teach these topics.
- **The Nicaraguan Association of Public Health, with branch offices in two states in the country, recognized the usefulness of the teaching package and shared it with their members.**

Activity 2. Complete the second competencies evaluation on the care provided during pregnancy, delivery, and post-partum and to newborns among recently graduated doctors

- **HCI completed the assessment of competencies (theoretical and practical) for neonatal and obstetric complications among senior medical students at three universities: UNAN Managua, UNAN León and UCAN (Quarter I).** The first two are the largest public universities in the country and the latter is a private university. For UNAN Managua and UNAN León, the assessments were conducted for the second time, allowing for comparison of results from the baseline carried out in 2012.
 - The results from evaluations on students at UCAN showed that students lack the required knowledge and skills to provide health services (see Figures 8-11).

Figure 8: Nicaragua: Percentage of correct knowledge responses on obstetric complications among fifth year medical students, UCAN León (Oct 2013), n=27

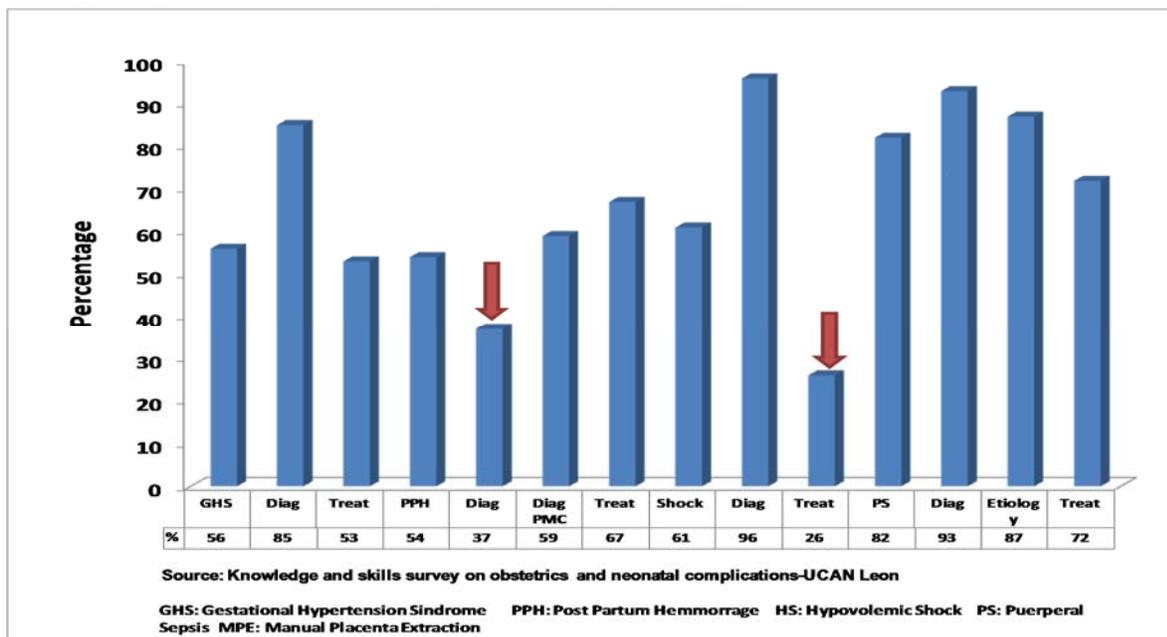


Figure 9: Nicaragua: Percentage of fifth year medical students with skills to complete lifesaving maneuvers in obstetric and neonatal complications, UCAN León (Oct 2013), n=18

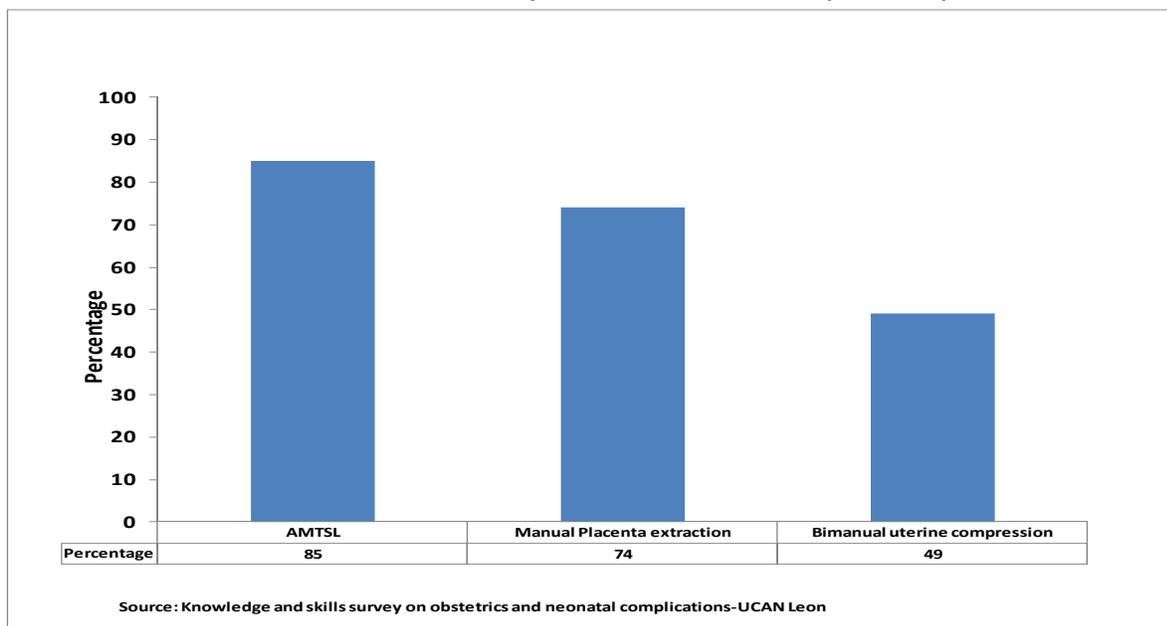


Figure 10: Nicaragua: Percentage of correct responses on identification of risk factors for perinatal asphyxia, immediate newborn care and resuscitation among fifth year medicine students, UCAN León (Oct 2013), n=27

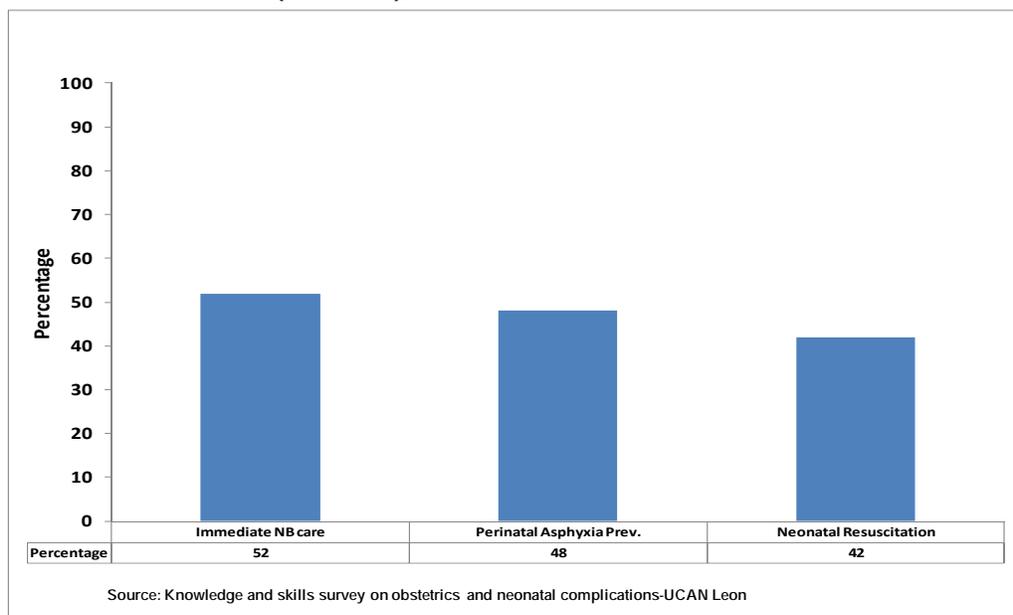
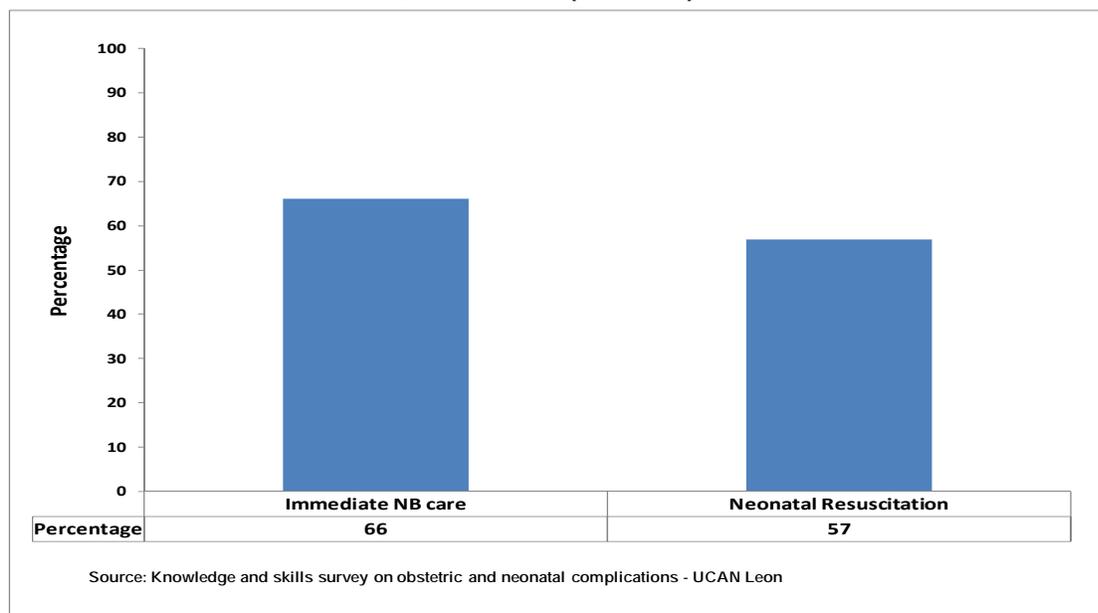


Figure 11: Nicaragua: Percentage of fifth year medical students with skills for immediate newborn care and neonatal resuscitation, UCAN Leon (Oct 2013), n=18



- **At UNAN Leon and UNAN Managua improvements from baseline to the October 2013 were found.** For UNAN Leon, improvement of knowledge scores ranged between 1-15%. The skills evaluation showed significant improvement in competencies, ranging from 1 to 53% (Table 16).

Table 16: Nicaragua: Skill scores for obstetrics and neonatal complications care among medical students, UNAN León (2012- 2013)

Scenarios Evaluated	2012 n=86	2013 n=136	Difference (%)

	(%)	(%)	
Active Management of the Third Stage of Labor	52	89	37
Manual Placenta Removal	38	91	53
Bimanual Uterine Compression	50	93	43
Immediate NB Care	67	68	1
Neonatal Respiration with Bag and Mask	66	75	9

- **At UNAN Managua the knowledge scores increased on average of almost 8 percentage points, whereas the percentage increase in skills ranged from 19-77% (Table 17)**
- **HCI completed the results sharing and analysis session in UNAN Managua with medical teachers from headquarters and departmental FAREM in: Matagalpa, Carazo, Rivas and Chontales (Quarters 1-2).** After analyzing data they identified knowledge gaps among medical graduate students for obstetrics complications care. These gaps were mainly on hypovolemic shock to post-partum hemorrhage, gestational hypertension syndrome, sepsis and recording the partograph chart. In neonatal complications care, gaps were in neonatal resuscitation and asphyxia prevention.

Table 17: Nicaragua: Skill scores among sixth year medical students for obstetric and neonatal complications care, UNAN Managua (2012- 2013)

Scenarios Evaluated	2012 n=75 (%)	2013 n=67 (%)	Difference (%)
Active Management of the Third Stage of Labor	65	89	24
Manual Placenta Removal	27	84	57
Bimanual Uterine Compression	16	93	77
Immediate Newborn Care	61	81	19
Neonatal Respiration with Bag and Mask	45	77	32

- **Training workshops were held with assessed students from UCAN and UNAN Managua universities in order to reinforce knowledge on specific topics where gaps were found.** Two hundred sixty-five (265) students starting rotation by hospitals and 116 starting social service were trained through these workshops. The main achievement is that these graduates will provide medical services at MINSAs units with greater knowledge and skills for neonatal and obstetrics complications care.

Activity 3. Strengthen Quality Continuous Improvement Implementation

- **In Quarter I, as part of the continuous quality improvement in teaching and in order to gradually reduce the gaps found in competency assessments, HCI worked on the design of two improvement cycles: one at UCAN and one at UNAN León.** UCAN's improvement goal was to introduce the checklists in the student assessment process, currently being used only during training. At UNAN León, the use and registration of information of students evaluated with the teaching package's methodologies in the database was designed for this purpose. Both improvement cycles will be measured in January, 2014. Each year the universities review their curricula and micro-programs, based on the results of evaluations of competencies to provide care for obstetric and neonatal complications teachers have continued to make adjustments trying to incorporate most of the content and methodologies of the Teaching Package.

- The quality team from UNAN León found that teachers in pediatrics have not developed the same enthusiasm than UNAN Managua pediatrics teachers, the latter have made significant changes to their curricula and to teacher and students performance, this prompted us to conduct a training session for experience exchange between them.
- During the session, UNAN Managua teachers shared their successful experiences in implementation and transfer of the teaching package modules of maternal and child health and Continuous Improvement of the Quality of Education with UNAN Leon teachers of, stating that the implementation of the teaching package methodologies has strengthened teamwork and improved performance among teachers of clinical pediatrics and obstetrics areas.
- As a result of technical assistance and exchange of experiences, pediatrics teachers at UNAN Leon pledged to introduce checklists in student assessment and teaching processes, intensify resuscitation courses and work on an implementation plan for teaching methodologies included in the teaching package; which will be presented in January 2014 to the quality team of this university.
- **Continued training teachers on the rapid cycle methodologies and identified improvement opportunities in the teaching-learning processes to promote continuous quality in teaching.** Most university teachers are health professionals without pedagogical training. The Teaching Package, therefore, has made their work easier as it contains clearly defined learning objectives as well as competencies to develop among students, technical notes, and all of the support materials needed to teach the topics. Systematic support is required for these teachers to gain ownership of the rapid cycle's methodology because they have not yet developed the necessary capabilities to drive the process for continuous quality improvement in teaching. The training was intended to motivate teachers in using this methodology in educational processes since compliance with improvement activities has not yet been achieved.
 - As part of continuous quality improvement in teaching, UNAN Leon received support to strengthen teachers' competencies to assess students' learning for a competence based curriculum, which is being implemented in this university. Through technical assistance we identified teachers at UNAN Leon who needed to gain deeper knowledge in building criteria for assessments and evidence of competencies gained by students for a specific teaching module. This was the same method used in the planning matrix for micro-planning of the different curriculum components of the Public Health Department. Twenty-two members of this Public Health Department and two from nursing teachers from the medical faculty at UNAN Leon University were trained on this topic. Using the regulatory curriculum documentation, teachers got to know, recognize, interpret and unify relevant regulatory aspects of said documentation. They also identified improvement opportunities that would strengthen the future curriculum design process at the faculty.
 - Teachers also received coaching to analyze assessment criteria and evidence for five competencies belonging to equal number of planning matrixes per competency of curriculum components of the Public Health Department, including one for nursing.
 - Teachers have developed capabilities to develop assessment criteria and obtain evidence of competencies among their students according to what is established by the universities' curricula.

Activity 4. To review and update available scientific evidence for neonatal and maternal mortality reduction

- **HCI hired a consultant to develop a guide on evidence-based interventions to reduce maternal and perinatal morbidity and mortality (Quarter 1).**
- **The preliminary version of the evidence-based interventions guide to reduce neonatal and perinatal morbidity and mortality was submitted for review (Quarter 2).** There

were two validation sessions, one in Leon with teachers from the medical and nursing faculties from the Universidad Nacional Autónoma de Nicaragua (UNAN) and members of the Perinatal Medicine Society. The second session was held in Managua with teachers from the UNAN medical and nursing faculties and members of the pediatrics, gynecology and obstetrics medical societies, and with specialist teachers from hospitals in Managua. Working groups were formed to review available evidence and share new evidence and statistical data to include in the guide. Participants provided important input to the contents and style of the guide's design and most of the guidance was subsequently included in the document.

- **Completed final version for layout and reproduction and sharing and distribution of this guide to teachers, students, specialist and members of pediatrics and obstetrics medical societies.**

Improvement in Key Indicators:

Activity	Indicators	Baseline (Oct- Dec 2013)	Last value (Jan-Sept2014)
1. To improve the health service delivery skills of medical and nursing graduates	500 medicine and nursing students graduating with competencies to provide care for maternal and child health, family planning and HIV	121	460 92% of the goal of 500 students
2. To consolidate the Teaching Package transfer process to the eight universities	80% of teachers of medical and nursing graduate teachers applying the Teaching Package teaching and assessment methodology in FP, MCH, and HIV	50%	85%

3 USAID Global Health Element and Core-funded Activities

3.1 Care that Counts Initiative to Improve Quality of Programming for Orphans and Vulnerable Children

Overview of HCI's Program in FY14

Key activities	What are we trying to accomplish?	Geographic scale
1. Partnerships in Community Child Protection	Create a partnership between existing African organizations that will provide technical leadership in the area of child protection and safety Through subcontracts with the Regional Psychosocial Support Initiative (REPSSI) and the African Network for the Protection and Prevention of Child Abuse and Neglect (ANPPCAN), provide technical support to ministry and partners to use improvement methods to improve quality of child protection mechanisms at the local level	Kenya, Tanzania, Swaziland, Uganda
2. Organizational capacity of REPSSI and ANPPCAN	Increase in <i>organizational and technical capacity</i> of African organizations in areas of creating and maintaining partnerships, governance, knowledge management, and communications	Africa

Main Activities and Results

Activity I. Partnerships in Community Child Protection

ANPPCAN activities under subcontract:

- **Conducted two district meetings in Mukono and Gulu districts in Uganda** (Quarter I). Mukono district in central Uganda and Kawampe district in Kampala city were the two initial districts proposed for the project. However, the national meeting in Uganda replaced Kawampe District with Gulu District in the north of Uganda as the second district for the project.
- **Identified and trained community facilitators on the community conversation tool in two project districts in Kenya** (Quarter I).
- **Worked with the District Children’s Officers to mobilize two groups of children and three groups of adults for community conversations in Kenya districts** (Quarter I).
- **Conducted community conversations in four communities in Kenya, Kayole and Mukuru in Embakasi District and Kawangware and Mutuini in Dagoretti District** (Quarter I).

REPSSI activities under subcontract:

- **Conducted two Tanzania district QI trainings in Muleba and Magu to test different approaches, with Diana Chamrad of URC** (Quarter I).
- **Conducted a joint regional TWG meeting between Manzini and Hhohho regions in Swaziland** (Quarter I).
- **Refined the QI training materials for the District meetings in conjunction with URC** (Quarter I).
- **Community conversations were held in the two Swaziland communities: Makholweni** October 24-25, 2013; Macambeni – November 7-8, 2013.
- **The whole team participated with ANPPCAN, HCI and government partners in a round table presentation of the project to the Regional Psychosocial Support Forum in Nairobi on October 30, 2013.** The presentation was facilitated by Lynette Mudekunya, REPSSI. Cornel Ogutu of ANPPCAN gave an overview of the project with a powerpoint presentation. After that all others contributed without power point. 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.

Close out of Partnerships in Community Child Protection (Quarter 2):

- **ANPPCAN and REPSSI finalized activities for the Partnership in Community Child Protection, including final reports on activities in four countries, Kenya, Tanzania, Uganda and Swaziland.** All deliverables were met except for attending a meeting of the partners which was to be organized by URC. The final meeting was not held because of lack of funds.
- **A presentation was made to USAID on the overall project.** REPSSI and ANPPCAN representatives were present on the phone to report on their contributions. USAID Swaziland was also on the call.
- **There were no further activities after Quarter 2 due to lack of funding. However, the following recommendations were made for follow-up on the Partnerships for Community Child Protection:**
 - It was evident from working with the communities that many policies and laws are not flowing to the community from the national level. There is a need to develop materials and media resources.

- Need to develop mechanisms for district level to track data. Quality performance hinges on the ability to collect data to see if improvement is happening.
- Need to develop guidelines for district and community partnering, i.e., for district staff to hold community conversations, certain days available to community members.
- Need to develop guidelines that include roles and responsibilities of various stakeholders at community level.
- Invest in communities and districts to implement the action plans they have developed.
- This initiative made significant investments in building the capacity for quality improvement in REPSSI and ANPPCAN, organizations that work across all levels of the child protection system. To continue building capacity for improvement in African child protection entities and organizations, it is recommended: 1) Create a plan for continuous learning; 2) Organizations need to be given opportunities to learn to apply improvement methods by holding workshops and learning sessions on quality of protection and by developing improvement aims and testing in community, resulting in evidence-based change packages; and 3) Widen the scope of organizations included in the project.

Activity 2. Organizational capacity of REPSSI and ANPPCAN

- **Partnership training workshop, Nairobi, Kenya, October 22-25, 2013.** Building capacity of REPSSI and ANPPCAN has been a key objective of the Partnerships Project. HCI provided two previous capacity building workshops for REPSSI and ANPPCAN staff on quality improvement and research and evaluation. This third and final workshop was entitled “Capacity to Sustainability” and was facilitated by Beverley Nuthu, a consultant from 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 participant interactions to learn and assimilate new ideas and behaviors. A primary focus was on self-awareness as a starting point to building management skills. Interactive exercises and effective tools were used to further increase self-awareness and awareness of others.
 - Objectives of the meeting included:
 1. Build the leadership capacity of the participants as well the application of leadership concepts to the strategic issues discussed.
 2. Enhance participant’s understanding of key elements of sustainable organizations and explore how they can leverage their experience in those areas for increased results.
 3. Explore how to apply some of the best practices in building of highly effective teams, resource mobilization and communication for sustainability.
 4. Explore ways to increase the collaboration between the two organizations.
- **REPSSI Forum, Nairobi, Kenya, October 29-31, 2013**
 - Diana Chamrad and Kate Fatta provided technical support to REPSSI to develop the program of the meeting and to coordinate speakers, including a panel on the Partnerships in Child Protection with government, REPSSI, ANPPCAN and HCI participants. HCI/ASSIST staff presented at a number of sessions.

3.2 Health Workforce Development

Overview of HCI's Program in FY14

Key activities	What are we trying to accomplish?	Geographic scale
1. Uganda Village Health Team (VHT) Productivity and Performance Study	<ul style="list-style-type: none"> • 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, Uganda 147 VHT members from 2 sub-counties

Major Activities and Results

Community health volunteers (CHVs) play an essential role in many countries to extend the outreach of health services in the community and improve linkages between those that need care and those that can provide it. However, while there have been a number of reports that CHVs are being overburdened, we know little about how to quantify their productivity, how that relates to their performance and what factors affect their productivity and performance.

There have been a number of studies that have examined the performance of community health volunteers and factors that influence their performance, no studies to our knowledge have concurrently examined the interplay of factors that can affect CHV productivity and performance and the relationship between them. An understanding of all these factors and how they influence both productivity and performance is important, particularly where it is possible that there may be trade-offs between them at different levels.

With support from PEPFAR, and in collaboration with World Vision, MOH, Busia District Health Office and other partners, HCI undertook a cross-sectional observational and retrospective quantitative study to:

1. Develop an aggregate measure of VHT productivity and performance
2. Develop, validate and publish a reliable method by which to quantify VHT productivity and performance
3. Explore the factors that influence VHT productivity and performance, and
4. Explore the nature of the relationship between VHT productivity and performance

This study was undertaken to examine productivity and performance of all Village Health Team members (VHTs) in two sub-counties of the district of Busia in Uganda (total VHTs included in analysis = 147 VHT members). The findings of this study can yield insights that can help us to better understand what factors contribute towards optimized performance and productivity and help us to explore what bearing the support provided by community and formal health systems may have on productivity and performance. Such evidence will help to inform better CHV program planning and implementation and generate greater awareness of factors that need to be taken into account when designing, scaling up or continuously supporting CHV programs. The findings and tools will be used to inform improvements in Uganda as well as CHV programs in other countries.

Activity 1: Uganda VHT Productivity and Performance Study

- **Data collection:**
 - Completed data collection for all VHTs in two sub-counties over a period equivalent to 63 data collector person-weeks (9 data collectors, over 7 weeks between September 2013 – December 2013)
- **Data entry, cleaning, coding, and validation**

- Completed in depth review of collected data, spot checks, cross-checks within dataset, cleaning and validation of data against hard copies to identify, address and manage potential data collection and entry errors. Excluded
- Data coded and over 400 dataset variables set up in SPSS in preparation for data analysis
- **Completed preliminary analysis**
 - Descriptive analysis of VHTs' performance in observed home visits, assessments of pregnant mothers and sick child under the age of five years.
 - Preliminary productivity analysis of core VHT tasks.

Final analysis and publications to be completed under USAID ASSIST.

3.3 HIV/AIDS

Overview of HCI's Program in FY14

Key activities	What are we trying to accomplish?	Geographic scale
I. Injection Safety	<ul style="list-style-type: none"> ● Apply QI principles to improve safe injection practices and reduce the incidence of unnecessary medical injections to reduce the transmission of HIV/AIDS, Hepatitis B & C and other blood-borne pathogens. 	<p>Mali: 15 sites total (11 public and 4 private facilities) in Bamako and Sikasso regions. Sikasso: 5 public facilities (out of 25) and 2 private facilities; Bamako region: 6 public facilities (out of 55) and 2 private facilities</p> <p>Swaziland: 60 site assessment with 15-20 for the intervention</p>

Activity I. Mali Injection Safety

Accomplishments:

- ASSIST completed three coaching visits and two learning sessions to sites, and a meeting was held to synthesize best practices. Final results from the Mali injection safety are presented in Figures 12-14.
- Adherence to standards for safe injection procedure (both for therapeutic injections and blood draws) improved from 88% in July 2013 to 94% in February 2014.
- Adherence to infection control and injection safety standards at the facility level improved from 74% in July 2013 to 93% in February 2014.
- Adherence to waste management standards improved from 71% in July 2013 to 89% in February 2014.

Figure 12: Percent adherence to standards for safe injection procedures, observation of the injection procedure using a checklist (June – Feb 2014)

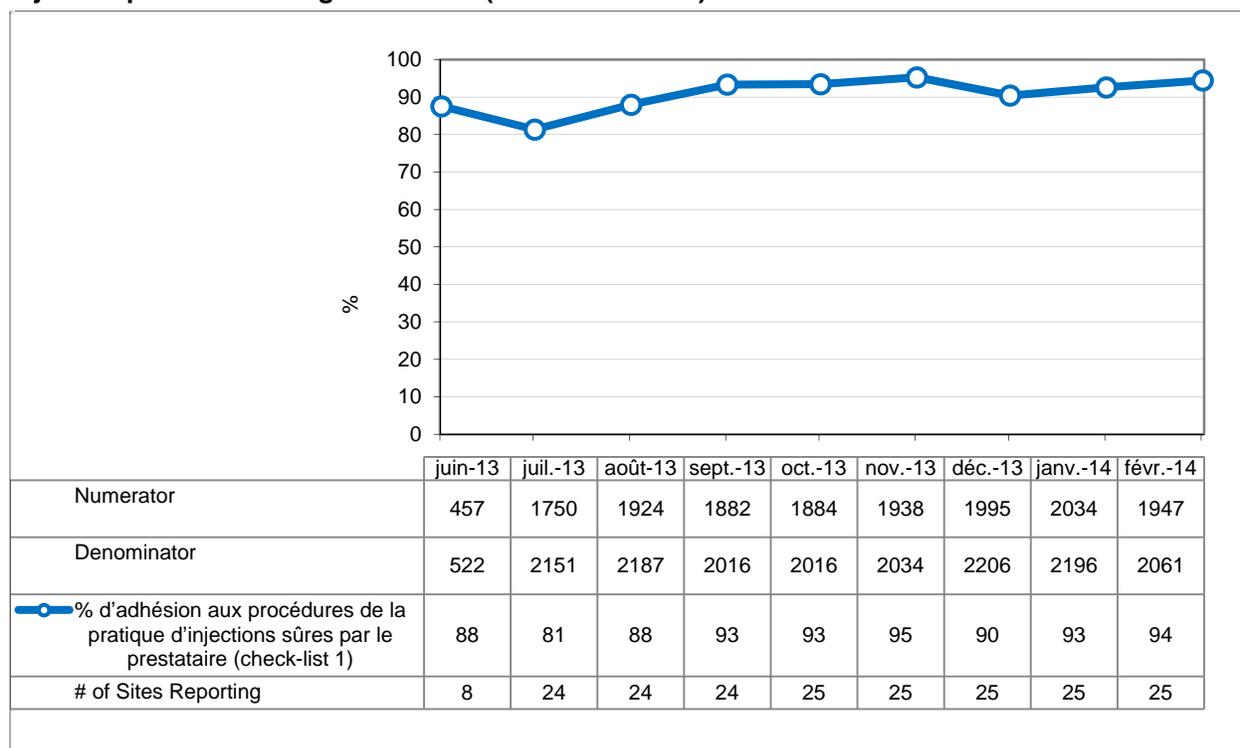


Figure 13: Mali: Percent adherence to infection control and injection safety standards at the facility level (June – Feb 2014)

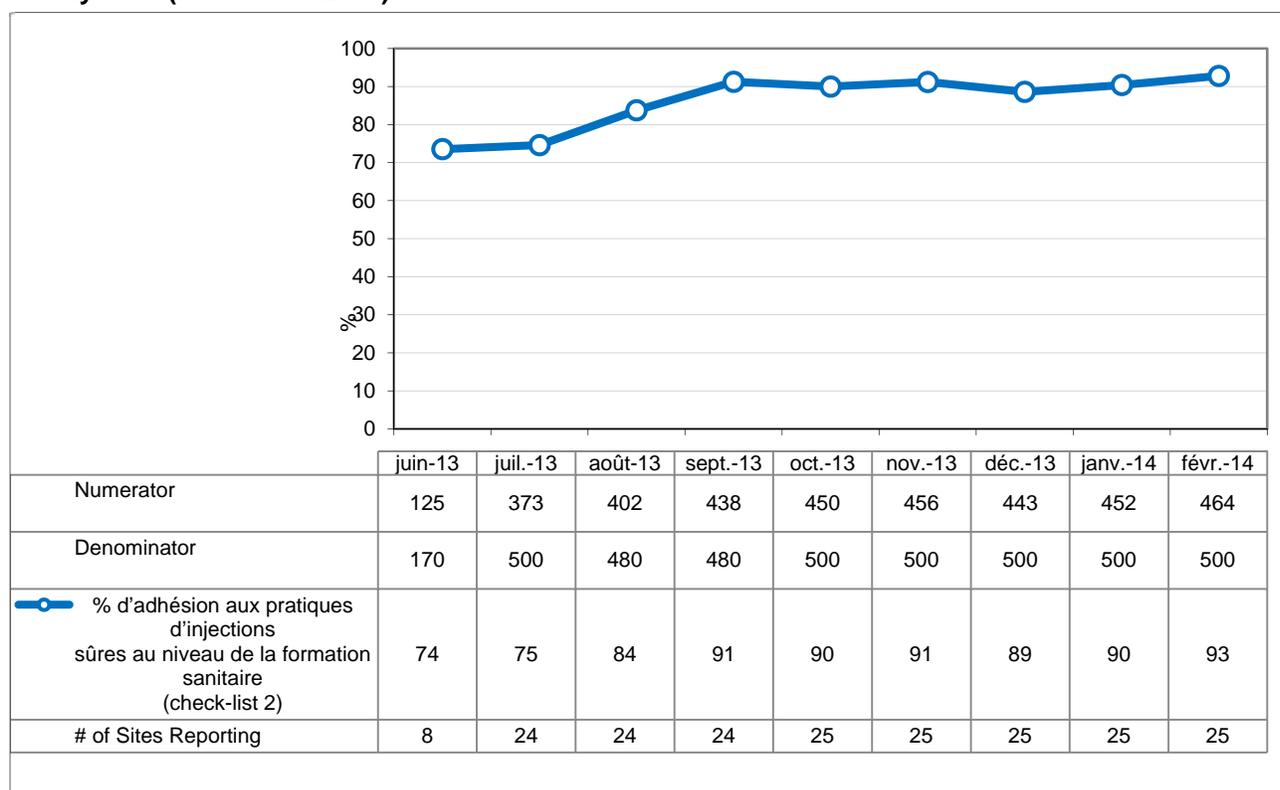
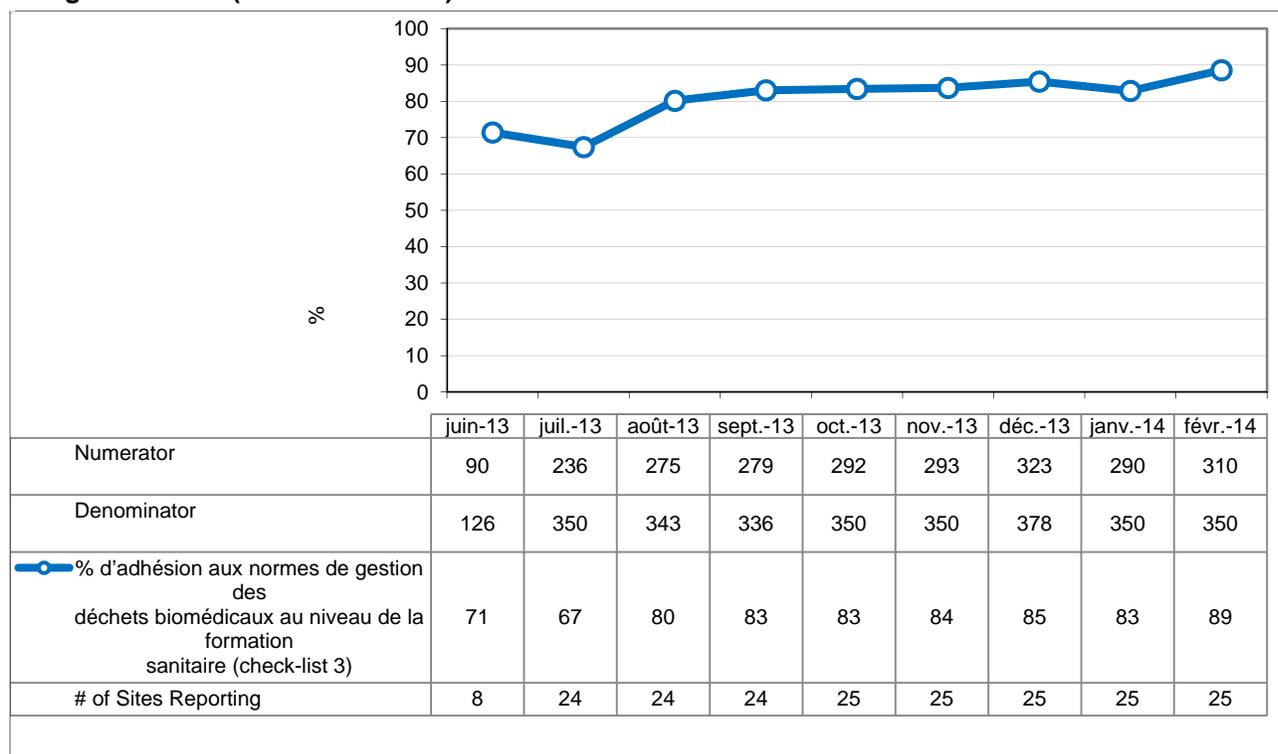


Figure 14: Mali: Percent adherence to standards for waste management, observation of the facility using a checklist (June – Feb 2014)



Improvement in Key Indicators

Activity	Indicators	Baseline (July 2013)	Last value (February 2014)
I. Injection Safety Mali	% adherence to safe injection standards for doing injection procedures	88%	94%
	% adherence to infection control and injection safety standards at the facility level	74%	93%
	% adherence to waste management standards	71%	89%

Activity 1b. Injection Safety Swaziland

Accomplishments:

- **Conducted a study on “Injection Safety, Waste Management Practices and Related Stigma and Discrimination in Swaziland: A national assessment, exploratory study, and evaluation”**
 - Submitted and received approval from URC IRB and Swaziland Scientific and Ethics Committee to conduct the study (August 2013).
 - Worked with health promotion unit from MOH to translate tools from English to SiSwati (August 2013).
 - Data collection tools were piloted collaboratively with the Ministry of Health (October 2013).
 - Data collectors were recruited and trained on methodology, ethics and assessment tool. The MOH through the immunization program, environmental health department and curative services were involved in the training and data collection (November 2013).

- Baseline assessment was conducted in 60 sampled study sites, with the aim of identifying the gaps in safe injection and waste management and identify intervention sites. Assessment priority areas included: preparation, administration and disposal of injections through a structured provider interview and observation of practice in 60 health facilities (study sites). Two providers were interviewed per study site (December 2013).
- Eight teams were used for data collection, the teams consisting of environmental health officers and nurses from the MOH and university students (24 data collectors) (December 2013).
- Data collection completed and data entry completed under HCI (December 2013/January 2014).
- Activities transitioned to ASSIST funding in March 2014.

3.4 Nutrition Assessment, Counseling, and Support

Overview of HCI's Program in FY14

Key activities	What are we trying to accomplish?	Geographic scale
1. Integrate nutrition assessment, counseling and support (NACS) services into HIV clinics to improve nutritional status of HIV clients	<ul style="list-style-type: none"> • Improve management and nutritional status of malnourished PLHIV. 	Zambia: integrate NACS in 8 selected facilities in Kitwe District.
2. Quality improvement technical assistance to communities for the Partnership for HIV-Free Survival (PHFS)	<ul style="list-style-type: none"> • Increase the identification of pregnant women and retention of HIV-positive pregnant women and their exposed infants receiving PMTCT services by linking them to facilities for care. 	Mozambique: 95 sites in 8 communities in 3 provinces (Gaza, Sofala and Zambezia).

Major Activities and Results

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

- **Participated in launch meeting in Kitwe District** in October 2013 - jointly supported by HCI-ASSIST/FANTA/LIFT.
- **Conducted QI training for health workers and district coaches** in June 2014.
- **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 in July.
- **The Resident Advisor, with support from NACS staff in Bethesda, worked with the eight sites to collect baseline data and test changes towards accomplishing positive results in nutrition assessment and categorizations of all HIV+ patients.**
- **In September, all activities were transitioned to the USAID ASSIST Project.**

Activity 2. Mozambique: Quality improvement technical assistance to communities for the Partnership for HIV-Free Survival

- **Conducted first PHFS community situational analysis in January-February 2014 in two districts in Sofala Province, Dondo and Mafambisse.** This piece of work involved one to one and focus group discussions. A total of sixty volunteers and four groups (church leaders, community leaders, women's savings group members and traditional healers) were interviewed. The situational analysis was used as the basis for understanding the area's community activities in order to identify HIV + mothers and link mothers and their exposed babies with facilities for services.
- **Conducted first community PHFS learning session in Gaza** in May 2014.

- **Conducted coaches training**
 - Sofala in May 2014.
 - Zambezia in May 2014.
- **Conducted second community PHFS learning session in Gaza** in August 2014.
- **Close-out:** In September, all activities were transitioned to the USAID ASSIST Project.

Improvement in Key Indicators

Activity	Indicators	Baseline (March 2014)	Last value (July 2014)
PHFS Quality Improvement technical assistance to communities	% of pregnant women receiving ANC services at the health facility in 15 <i>bairros</i> in Gaza Province, Mozambique	36%	71%
	% of HIV+ pregnant women initiated on treatment in 15 <i>bairros</i> in Gaza Province, Mozambique	81%	100%

4 Common Agenda Activities

4.1 Research and Evaluation

Overview of HCI's Program in FY14

Key activities	What are we trying to accomplish?	Geographic scale
1. Evaluation and cost-effectiveness of QI approaches and strategies (including comparative studies)	<ul style="list-style-type: none"> • Advance global learning on comparative advantage and economic efficiency of QI activities 	Mali Cote d'Ivoire
2. Evaluation of effectiveness and efficiency of chronic care improvement activities in Georgia	<ul style="list-style-type: none"> • Advance global learning on comparative effectiveness and economic efficiency of QI activities in hospitals and primary care centers for chronic care 	Imereti and Samtredia regions of Georgia

Table 18 lists all research and evaluation studies carried out under HCI TO3 in FY14. During the year, HCI completed two studies:

- Cost-effectiveness of HIV/AIDS Quality Improvement interventions in Côte d'Ivoire.
- An evaluation and cost-effectiveness analysis of an improvement collaborative for eclampsia /pre-eclampsia services in Mali.

Preliminary results are available for one study:

- Effectiveness and cost-effectiveness of improving hospital and ambulatory care for chronic diseases in Imereti Region, Georgia.

Table 18: Research and evaluation studies carried out under HCI TO3 in FY14

Country	Study	Technical Area	Clinical Area	Status
Cote d'Ivoire	Cost-effectiveness of HIV/AIDS Quality Improvement interventions	Cost-effectiveness	HIV/AIDS	Completed
Effectiveness and cost-effectiveness of improving hospital and ambulatory care for chronic diseases in Imereti Region	Cost-effectiveness	Chronic Diseases	Preliminary results completed	
An evaluation and cost-effectiveness analysis of an improvement collaborative for eclampsia /pre-eclampsia services	Cost-effectiveness	Maternal Health	Completed	

Publications

In FY14, one study that was completed in the previous fiscal year was published in a peer-reviewed journal.

- Cost-Effectiveness of Improving Health Care to People with HIV in Nicaragua. Nursing Research and Practice, January 2014. <http://dx.doi.org/10.1155/2014/232046>

Study findings

- **Cost-effectiveness of HIV/AIDS quality improvement interventions in Cote d'Ivoire**
 - HCI has been working in Cote d'Ivoire since 2007 to implement improvement interventions at selected HIV treatment facilities. Program assessments to date have focused on process-level improvements; this analysis aimed to assess the impact and cost-effectiveness of the HCI interventions via program-attributable changes in patient utilization and morbidity.
 - The analysis used a retrospective cohort design based on patient records at 26 primary- and secondary-level facilities in Abidjan (public and private) that provide HIV care and treatment. Half were sites where HCI interventions had been implemented, and the other half did not participate in the intervention. Data were abstracted from patient and facility records by trained research assistants. Each facility contributed approximately 45 records from patients who had initiated ART on or before March 2013, plus a subset of 10 records for an assessment of data completeness, and facility costs (medicines, laboratory supplies, human resources, plus HCI program expenses). Utilization was assessed in terms of clinical activities (assessment of CD4 level, and/or examination including patient weight, and/or a change in medication), and health outcomes (CD4 count value, weight value). These were measured as continuous variables and analyzed per 6-month period, from ART initiation until the date of data collection, or until loss to follow-up if sooner. Associations between these outcomes and the HCI program were

explored in a series of univariate and multivariate models, the latter with incremental addition of covariates to control for key demographic and clinical factors.

- Unadjusted analyses results showed HCI site status was associated with improved care in the near-term (within 6 months of ART initiation): 46% of patients at HCI sites received follow-up care within 6 months of initiating ART, versus 40% of patients at non-HCI sites ($p=0.03$). But this association did not persist over a longer time, nor were health improvements demonstrated. Approximately two-thirds of patients received care at HCI-assisted facilities within the first year of initiating ART regardless of HCI program status ($p=0.22$), and approximately half received care between one and two years of initiating ART ($p=0.45$). Baseline average CD4 levels were slightly higher for HCI compared to non-HCI sites ($p=0.06$), and were not different by month 12 ($p=0.85$) nor over two years ($p=0.29$).
- However, the multivariate models found no such associations in shorter or longer time periods. Patients at HCI sites had about the same odds of care within six months of initiating ART (odds ratio = 1.3-1.4 in models with different sets of covariates, $p>0.05$). On average, patients had a CD4 increase of 158 cells/mm³ and an average weight gain of 6.5 kilograms, with no difference between HCI and non-HCI sites ($p>0.05$).
- This lack of a significant program-related effect may be due to the high proportion of missing information. Very few patient records included care after baseline, and although data availability was better for certain items at HCI site records, this was not consistent and the overall prevalence of missing data was still high. For instance, only one-third of records from HCI sites and two-thirds of records from non-HCI sites included baseline CD4 values; and 5% of records from HCI sites and 24% from non-HCI sites reported 6-month exam data. Cost-effectiveness was ultimately not analyzed because a program effect was not found and because of missing data on relevant costs.
- The lack of significant program related effect in multivariate analyses results should be interpreted with caution due to missing data. A functioning health information system is necessary for improving patient care, protecting public health, and improving the efficiency and transparency for reporting and research. More robust utilization and outcome data are needed to demonstrate the impact of this intervention.
- **Effectiveness and cost-effectiveness of improving hospital and ambulatory care for chronic diseases in Imereti Region, Georgia**
 - Data collection for this study began in FY13. Preliminary results were made available by the HCI Project. This study will be continued under the USAID ASSIST Project, which will publish the final results.
 - A regional demonstration QI intervention was implemented by HCI in Georgia with the goal of improving quality, continuity, consistency, and coordination of ambulatory and hospital services for prioritized clinical conditions in the Imereti Region in western Georgia. The intervention was implemented in eight facilities (four hospitals and four polyclinics) and 13 solo clinical practices. It focused on improving the quality of care of adults seeking care for cardiovascular and/or COPD and asthma as well as pediatric patients seeking care for asthma or pneumonia. The evaluation sought to assess the quality of screening and management services of project priority diseases/clinical conditions, assess the effectiveness of the quality improvement intervention in the facilities and solo practices, and determine the efficiency of the intervention where inputs are costs per patient and outcomes are process and/or outcome indicators of service performance.
 - **Research questions:** 1) What change in quality of care indicators is seen from before implementation of the improvement intervention to 12 months after the beginning in the clinical areas of cardiovascular, asthma, and COPD care for adults and of asthma and pneumonia care

- for children? 2) What is the cost of the HCI intervention from the perspective of the intervention funders (HCI and who pays for the time of clinicians involved in improvement, etc.?) and the health care expense payers (patients and insurers)? 3) What is the incremental cost-effectiveness of the HCI intervention in terms of resources expended per additional process/outcome indicator achieved in the intervention group compared to the control group?
- Analysis of data from this evaluation are currently underway and will be completed in the coming months under the USAID ASSIST Project.
 - **An evaluation and cost-effectiveness analysis of an improvement collaborative for eclampsia/pre-eclampsia services in Mali**
 - Empirical evidence for the effectiveness of collaboratives improvement interventions in low- and middle-income countries is limited. Due to operational restrictions, most evaluations have used uncontrolled pretest–post-test designs that cannot rule out other plausible causes for observed improvements.
 - This evaluation sought to determine the costs and effects of this collaborative improvement intervention and compare them to the costs and effects of a basic clinical training only.
 - **Research questions:** 1) Do pregnant and delivering women in collaborative improvement intervention facilities receive better care (screening/diagnostic and treatment of pre-eclampsia/eclampsia) than those in basic clinical training-only facilities? 2) What is the incremental cost-effectiveness of the collaborative improvement intervention compared to the basic clinical training-only intervention in terms of adherence to pre-eclampsia/eclampsia screening and management standards?
 - **Methodology:** This evaluation used a controlled longitudinal design. Intervention sites were facilities participating in the EONC and pre-eclampsia/eclampsia (PEE) improvement collaborative in the Diéma district (seven community health centers and the district referral hospital) and the control sites were facilities in Yélimané district (six community health centers and the district referral hospital). As part of the study, control facilities received basic clinical training on PEE. However, additional trainings were subsequently conducted by the Ministry of Health at some sites. At the request of the Ministry of Health, only facilities with at least one physician were included in the PEE intervention. To ensure comparability, we also applied this restriction to the control facilities. Three data collection methods were used: patients chart reviews, observations of providers, and self-administered questionnaires for providers.
 - Due to the March 2012 coup d'état and ensuing suspension of HCI activities in Mali from March to August 2012, modifications were made to the initial evaluation design. As a result, data were collected four times using chart review, and twice (baseline and end-line) using observations and self-administered questionnaires between February 2011 and June 2013. In addition, unlike most HCI projects, the implementation of the intervention only included one learning session and four coaching visits which included but did not focus on PEE.
 - Data on adherence to PEE screening and management standards were calculated based on chart reviews and observations. Hierarchical regression models with differences-in-differences analyses were used to adjust for clustering of observations by site and baseline differences in terms of adherence to pre-eclampsia/eclampsia screening and management standards. Potential confounders such as woman's age and parity were also controlled for in the regression models.
 - Costs for the intervention were obtained from project records and used as inputs for the decision model along with the results from the logistic regression analysis. We used the perspective of the payer for the intervention. The two outputs used were compliance to screening and PEE management standards.
 - **Findings:** A total of 1756 charts were reviewed, 893 in the intervention district and 863 in the control district. Only 32 pre-eclampsia and 20 eclampsia cases were detected during the

evaluation based on chart reviews. To validate the data collected from chart reviews, observations were conducted at baseline and end-line to estimate adherence to standards for pre-eclampsia screening. Baseline scores for pre-eclampsia screening based on observations appear higher than the mean score obtained from chart review in the intervention facilities (0.96 versus 1.20) and lower than the score obtained from chart reviews in the control districts (0.57 versus 1.02). At end-line, the scores in both districts appeared slightly higher based on observation than chart review. Data from observations confirmed that end-line scores were higher in the intervention than the control group (4.20 versus 3.12; $p < 0.001$).

- Regression analyses showed a modest effect of the intervention on adherence to pre-eclampsia screening standards and overall adherence to PEE screening and management standards. On average, the intervention group improved by 0.02 points for adherence to screening and 0.38 points for overall adherence per month ($p < 0.001$). In addition, the intervention group was associated with 7% higher odds of scoring at least as high as the 75th percentile for overall adherence to PEE standards ($p = 0.035$). The intervention was also associated with 6% higher odds of scoring at least the 75th percentile or above for screening standards. However, this odds ratio was only marginally significant ($p = 0.05$). The differences in scores for screening adherence and overall adherence attributable to the intervention between baseline and end-line are 0.46 and 8.8 points, respectively.
- The incremental cost-effectiveness ratios were 524,000 CFA francs per additional patient screen according to standards and 453,000 CFA francs per additional patient managed with overall adherence to standards.
- **Conclusions:** This controlled evaluation contributes to the needed evidence base for the effectiveness of collaborative improvement interventions. While this evaluation demonstrates an effect of a collaborative improvement on pre-eclampsia and eclampsia care, the observed effect is weaker than expected. Several factors may have led to an underestimation of the intervention effect including the fact that only one learning session and few coaching visits were organized during the intervention, the suspending of the intervention activities in Mali due to the political situation, and the implementation by the Ministry of Health of pre-eclampsia and eclampsia interventions in the control district. Future evaluations are needed to assess the effectiveness of improvement collaboratives with more certainty to determine factors that promote or hinder the effectiveness of collaborative improvements in a variety of settings.
- For approximately one unit of GDP per capita, we expect one additional patient to receive screening compliant with standards of care and one additional patient to receive care to overall compliance with care standards. It was not possible to link these process measures to specific health outcomes therefore this result leaves the cost-effectiveness of the program dependent on willingness to pay for these process outcomes. The 95% confidence interval for this estimate indicates this is not a robust result and there is a small possibility that the strategy without the improvement intervention may be as or more cost-effective than the strategy with the improvement intervention. This suggests that the investments in this relatively low level of inputs aimed at improving health system performance may not yield acceptably efficient results. Other studies have shown that improvement interventions can be successful but these studies involved more intensive activities for supporting personnel in the targeted facilities.

4.2 Technical Leadership and Communication

Overview of HCI's Program in FY14

Key activities	What are we trying to accomplish?	Geographic scale
1. Provide global technical leadership for USAID's worldwide efforts to improve health care in developing countries	<ul style="list-style-type: none"> Demonstrate the results of USAID's investment in health care quality improvement 	Global
1. Advocate for adoption of QI approaches, policies, and programs by international, regional, and national health care organizations	<ul style="list-style-type: none"> Expand the use of QI approaches in USAID-assisted health care and social services systems 	Global
2. Produce technical reports and submit articles to peer-reviewed journals that describe QI interventions and measure their impact	<ul style="list-style-type: none"> Develop and disseminate evidence for the results, cost-effectiveness, and benefits of applying modern QI approaches in USAID-assisted health care systems 	Global

Main Activities and Results

Activity 1. Provide global technical leadership for USAID's worldwide efforts to improve health care in developing countries

In FY14, HCI submitted the following major deliverables to USAID:

Deliverable	Date submitted to COR
HCI TO3 FY14 Annual Work Plan	October 30, 2013
HCI TO3 Performance Monitoring Report No. 25	October 31, 2013
HCI TO3 FY13 Self-Evaluation Report	December 12, 2013
HCI TO3 FY13 Self-Evaluation Orals	December 16, 2013
HCI TO3 FY13 Annual Project Report	December 24, 2013
HCI TO3 Performance Monitoring Report No. 25	January 31, 2014
HCI TO3 Performance Monitoring Report No. 26	April 30, 2014
HCI TO3 Performance Monitoring Report No. 27	July 31, 2014
HCI TO3 Performance Monitoring Report No. 28	September 29, 2014

Activity 2. Advocate for adoption of QI approaches, policies, and programs by international, regional, and national health care organizations

- Advocated for the application of QI approaches to child protection services in Africa:** At the Regional Psychosocial Support Forum sponsored by REPSSI, held October 29-31, 2013 in Nairobi, HCI and ASSIST staff played a prominent role in the organization and delivery of the conference to advocate for the use of QI approaches. HCI partners REPSSI and ANPPCAN both made presentations and statements in support of the use of improvement methods to achieve better outcomes for vulnerable and abused children.
- Aims, Indicators, Content Technical Meeting:** Dr. Diana Chamrad met with representatives from ANPPCAN and REPSSI in Dar es Salaam at the end of June 2014, at the Vulnerable Children and Families "Aims, Content and Indicators" technical meeting convened in Tanzania. (Because of their ongoing work with ASSIST and their technical leadership in child protection, ANPPCAN and

REPSSI representatives were invited to the meeting.) Both organizations reaffirmed their endorsement of improvement methods.

Activity 3: Produce technical reports and submit articles to peer-reviewed journals both of which describe QI interventions and measure their impact

During FY14, five articles describing HCI results were published or accepted for publication in peer-reviewed journals. HCI published three technical reports, five research reports and one research report summary (Table 19).

Table 19: HCI publications in FY14

Articles Published or Accepted for Publication in Peer-reviewed Journals
Tawfik Y, Rahimzai M, Ahmadzai M, Clark A, Kamgang E. Integrating Family Planning in Postpartum Care through Quality Improvement: Experience from Afghanistan. <i>Glob Health Sci Pract.</i> 2(2):226-233. Published 13 May 2014. Available at: http://dx.doi.org/10.9745/GHSP-D-13-00166 .
Broughton EI, Nunez D, Moreno I. Cost-Effectiveness of Improving Health Care to People with HIV in Nicaragua. <i>Nursing Research and Practice.</i> Published 25 May 2014. Article ID 232046, 6 pages, 2014. doi:10.1155/2014/232046. Accessible at: http://www.hindawi.com/journals/nrp/2014/232046/
Jennings L, Yebadokpo A, Affo J, Agbogbe M. Use of job aids to improve facility-based postnatal counseling and care in rural Benin. <i>Maternal and Child Health Journal.</i> doi:10.1007/s10995-014-1537-5. Accepted for publication 30 May 2014.
Rahimzai M, Naim AJ, Holschneider S, Hekmati AK. Engaging frontline health providers in improving the quality of health care using facility-based improvement collaboratives in Afghanistan: Case study. Accepted for publication in <i>Conflict and Health</i> in September 2014. Manuscript number: 5641720412983154
Mwaniki MK, Vaid S, Chome IM, Amolo D, Tawfik Y. Improving service uptake and quality of care of integrated maternal health services: The Kenya Kwale District Improvement Collaborative. <i>BMC Health Services Research</i> 14:416. Available at: http://www.biomedcentral.com/1472-6963/14/416 .
Technical and Research Reports (Month Published)
Applying the Chronic Care Model to Health System Design in Low-resource Settings: Lessons from HIV Improvement Interventions. <i>Technical Report</i> (December 2013)
Facteurs influençant la sortie des patients vivant avant avec le VIH du circuit de traitement en Côte d'Ivoire. <i>Rapport de Recherche et Evaluation.</i> (January 2014)
Factors Associated with Loss to Follow-up Status among ART Patients in Cote d'Ivoire. <i>Research Report Summary.</i> (January 2014)
Nyagawa F, Kamote E, Sono K, Mussanga J, Chamrad D, Coly A, Mwita S. 2014. Perceived Impact of Quality Improvement Trainings on the Care and Support of Most Vulnerable Children and their Households in Tanzania. <i>Research and Evaluation Report.</i> (January 2014)
Improving community support for health extension workers in Ethiopia. <i>Technical Report</i> (April 2014)
Operationalizing the WHO 2010 Guidelines on the Prevention of Mother-to-Child Transmission (PMTCT) of HIV and Infant Feeding in Three Health Care Facilities in Tanzania. <i>Technical Report</i> (May 2014)
A comparative evaluation and cost-effectiveness analysis of collaborative improvement for maternal and newborn care services in Uganda. <i>Research and Evaluation Report.</i> (September 2014)
An Evaluation and cost-effectiveness analysis of a collaborative improvement intervention for pre-eclampsia/eclampsia care in Mali. <i>Research and Evaluation Report.</i> (September 2014)
Impact and cost of an HIV/AIDS improvement intervention in Côte d'Ivoire. <i>Research and Evaluation Report.</i> (September 2014)

5 Performance Tracking Plan

Table 20 shows HCI TO3 cumulative achievements against performance targets through the end of FY14.

Table 20: HCI TO3 performance tracking plan: Cumulative achievements through FY14

HCI TO3 Performance Target	How the target was met by the end of FY14
Objective I: Document the interventions supported by this task order to improve the quality of health care, how quality was measured, and the impact of these interventions	
<p>Performance target I.1: Within the first year of Task Order #3, the contractor is required to complete field-testing and analysis of results in the six countries from Task Order #1, finalize the design of the SES and implement the system for all major improvement activities supported by the contract.</p>	<p>Target has been met: The Systematic Evaluation System (SES) Endline Evaluation report was completed and submitted to the Contracting Officer's Representative (COR) on September 30, 2010. The learning system standards were communicated to all HCI country teams through guidance issued by the HCI Director in September 2010; all HCI country offices reported on their application of the learning system standards for the FY10, FY11 and FY12 TO3 self-evaluation reports.</p>
<p>Performance target I.2: Within the first year of Task Order #3, the contractor must submit to the COTR a comprehensive report summarizing the development and ongoing implementation of the SES.</p>	<p>Target has been met: A report summarizing the learning system standards and how they are implemented in all countries was submitted to the COR on September 30, 2010.</p>
<p>Performance target I.3: Within the first year of Task Order #3, the contractor must submit for COTR approval a detailed plan for the analysis and dissemination of the content of the SES, including a quantitative summary of results in terms of % improvement of all indicators, specification of interventions and duration of observations of indicators</p>	<p>Target has been met: A plan for ongoing analysis and synthesis of quantitative results from the learning system was submitted to the COR on September 30, 2010. Beginning in FY11, HCI country and technical teams have placed more emphasis on developing knowledge products that convey key learning derived from improvement activities, including specification of effective interventions. Technical reports on HCI-supported work in Tanzania, Cote d'Ivoire, Nicaragua, Guatemala, Bolivia, Honduras, Uganda, and Niger have summarized such learning and provided follow-on recommendations. Comparisons of improvement in key indicators by country were reported in the HCI TO3 FY10, FY11 and FY13 TO3 self-evaluation reports.</p>
<p>Performance target I.4: Beginning with the submission of the Year One annual report for Task Order #3, the contractor will provide a comprehensive summary of supported QI activities and the quantitative results of these activities, including analysis with follow-on recommendations.</p>	<p>Target has been met: The TO3 FY10, FY11, FY12, FY13 and FY14 Annual Project Reports included a comprehensive summary of supported QI activities and quantitative results with analysis and next steps for implementation. At the country level, HCI teams presented recommendations for follow-on actions to host country officials through regular briefings and at workshops and conferences marking the conclusion of specific improvement activities. Recommendations for follow-on actions were also presented to each funding Mission and USAID Washington office through country- and activity-specific end-of-year reporting, Country Operational Plans, and Headquarters Operational Plans.</p>

HCI TO3 Performance Target	How the target was met by the end of FY14
	Completed the HCI Final Summary Report (2007-2014), summarizing HCI's accomplishments and key learning under TO1 and TO3.
Objective 2: Institutionalize modern quality improvement approaches as an integral part of health care in USAID-assisted countries	
<p>Performance target 2.1: Starting with the Year Two annual report for Task Order #3 (due December 2011), the contractor's annual report will include, for each major country program, a summary of steps taken to support or measure the institutionalization of QI.</p>	<p>Target has been met:</p> <p>Drawing on project-supported studies of institutionalization, in FY11 HCI developed a framework with the key elements that contribute to the institutionalization of QI at the national, regional, and service delivery levels. To determine the level and type of institutionalization that has occurred, data were collected in the last quarter of FY11 from 15 countries that had been receiving HCI assistance for at least 12 months prior to data collection: Afghanistan, Bolivia, Cote d'Ivoire, Ecuador, Guatemala, Honduras, Mali, Namibia, Nicaragua, Niger, Russia, South Africa, Swaziland, Tanzania, and Uganda. HCI country teams interviewed individuals involved in improvement activities at each level (national, regional, district, and facility). The summary results of this assessment of progress to date in institutionalizing QI approaches were summarized in the HCI TO1 FY11 and TO3 FY11 self-evaluation reports in sections addressing "Progress toward Achieving Task Order Objective 2, Institutionalization" and reported in a separate research report.</p> <p>In FY12, to complement the FY11 findings about level and type of institutionalization, HCI conducted a qualitative study to better understand the activities and support HCI field offices provided to 17 HCI-assisted countries to facilitate the institutionalization of improvement at the national level. We also explored the facilitating factors and barriers to institutionalization. A review of quarterly and annual reports from each participating country was conducted. Based on these reports, tailored guides were developed for interviewing HCI Chiefs of Party. The findings from this study were summarized in the FY12 and FY13 HCI TO3 self-evaluation reports.</p>
Objective 3: Expand the evidence base for the application of QI to human resources (HR) planning and management	
<p>Performance target 3.1: The contractor will support the Niger HR collaborative, including introduction of the standardized evaluation system, and provide USAID with detailed progress reports at six-month intervals beginning six months from the beginning of Task Order #3.</p>	<p>Target has been met:</p> <p>Six-month progress reports on the Niger HR collaborative were submitted to the COTR on March 31, 2010; September 30, 2010; June 10, 2011; September 29, 2011; and March 30, 2012.</p> <p>This collaborative was completed in December 2011; the final report was published in September 2012.</p>
<p>Performance target 3.2: During the first year of Task Order #3, the contractor will complete field-testing the current tool for monitoring community health worker performance in maternal-child health services in at least two programs. On the basis of</p>	<p>Target has been met:</p> <p>The FY10 TO3 Self-Evaluation Report included (in section 2.2.3.2) a discussion of the formal field testing of the CHW Assessment and Improvement Matrix (AIM) tool in Nepal, Benin, Ethiopia, and Zambia in FY09 and FY10. A revised version of the tool was published in April 2010 on the HCI Portal and disseminated among members of the CORE Group. Further revisions were made to the tool following its fourth application in Zambia in September 2010; the final version of the tool was published on the HCI Portal in March 2011 and disseminated at CORE Group meetings in May and October 2011 and at the GHC Conference in</p>

HCI TO3 Performance Target	How the target was met by the end of FY14
<p>these field tests, the contractor will make indicated revisions to the tool.</p>	<p>June 2011, where it was disseminated in conjunction with the launch of the CHW Central community of practice website.</p> <p>The French version of the CHW AIM toolkit, <i>Matrice d'évaluation et d'amélioration de la performance des agents de santé communautaires (MEAP ASC): Une boîte à outils pour l'amélioration des programmes et services des agents de santé communautaires</i>, was published by HCI in September 2012.</p> <p>The Spanish version of the CHW AIM toolkit, <i>Matriz de Evaluación y Mejoramiento para Trabajadores de Salud Comunitaria (MEM TSC): Un Kit de Herramientas para mejorar los Programas y Servicios de Trabajadores de Salud Comunitaria</i>, was published by HCI in September 2012.</p> <p>In FY13, staff from Initiatives Inc. updated the CHW AIM Toolkit in English. The revised toolkit was published in September 2013 and distributed at the CORE Group Fall Meeting in October 2013.</p>
<p>Performance target 3.3: During the first year of the Task Order, the contractor will develop a plan for introducing the community health worker performance evaluation tool into participating USAID mission programs, including a strategy for providing distance technical support for implementing partners.</p>	<p>Target has been met:</p> <p>During FY10, the CHW AIM tool was disseminated widely, and HCI was advised by the MCH Group at USAID that they no longer want a plan for introducing the tool to Missions.</p>
<p>Performance target 3.4: During the course of Task Order #3, the contractor will develop at least three additional human resources collaboratives in high-burden AIDS countries, incorporating findings from the Niger HR collaborative cited above.</p>	<p>Target has been met:</p> <p>Under TO3, HCI carried out four human resources collaboratives in three high-burden AIDS countries, drawing tools and lessons developed in Niger:</p> <ol style="list-style-type: none"> 1) HR Collaborative in Tandahimba District, Mtwara Region, Tanzania 2) CHW Collaborative in Oromia, Ethiopia 3) District health management performance collaborative in Lindi Region, Tanzania (with all six Council Health Management Teams and the Regional Health Management Team) 4) Pharmaceutical workforce management collaborative in Uganda
<p>Performance target 3.5: During the course of Task Order #3, the contractor will carry out at least five field studies addressing the impact of human resources interventions on the quality of care, including the task-shifting strategy.</p>	<p>Target has been met:</p> <p>By the end of FY13, under TO3, HCI completed five studies on the impact of human resources interventions on quality of care:</p> <ol style="list-style-type: none"> 1) Evaluation of the Scale-up of the PMTCT Infant Feeding Counseling Training Program in Tanzania. HIV Training Evaluation. This study was completed in FY10 and its final report published in September 2010. 2) The findings of the Uganda expert patient study were published in November 2011 in the report, <i>Task Shifting in HIV/AIDS Service Delivery: An Exploratory Study of Expert Patients in Uganda</i>. 3) The findings of the assessment of the effectiveness of the CHW AIM tool for improving CHW program functionality in Zambia was published as the technical report, <i>Improving CHW Program Functionality, Performance, and Engagement: Operations Research Results from Zambia</i>, in June 2012.

HCI TO3 Performance Target	How the target was met by the end of FY14
	<p>4) Documentation of the Niger HR collaborative’s impact on quality of care is described in the final report, <i>The Human Resources Collaborative: Improving Maternal and Child Care in Niger</i>, published in September 2012.</p> <p>5) Documentation of the Tanzania HR collaborative’s impact on quality of care is described in the final report, <i>Improving quality of HIV services and health worker performance in Tandahimba District, Tanzania: An evaluation</i>, was published in July 2013.</p>
<p>Objective 4: Expand experience with the improvement collaborative approach in USAID-assisted countries</p>	
<p>Performance target 4.1: During the course of Task Order #3, the contractor will develop and support 20 Phase I (improvement) collaboratives, including those begun under Task Order #1, for an average of two and a half years. These collaboratives will document an average level of improvement in the selected quality indicators of greater than 10% within 18 months.</p>	<p>Target has been met:</p> <p>This performance target was exceeded in FY10: 33 phase I improvement collaboratives were launched or completed under TO1 by the end of FY11. By the end of FY14, 26 additional Phase I improvement collaboratives were launched under TO3, for a total of 59 phase I collaboratives supported under HCI. The phase I collaboratives supported under HCI TO3 were:</p> <ol style="list-style-type: none"> 1. Afghanistan maternal and newborn health community demonstration collaborative (Balkh and Kunduz Provinces) 2. Afghanistan maternity hospital demonstration collaborative (Kabul, Parwan, Bmayan, Logar, Wardak, and Herat Provinces) 3. Afghanistan post-partum FP collaborative (Kabul) 4. Uganda maternal-newborn care facility demonstration collaborative (Luwero and Masaka Districts) 5. Uganda maternal-newborn care community demonstration collaborative (Luwero and Masaka districts) 6. Uganda palliative care demonstration collaborative (Mayuge and Namutumba districts) 7. Uganda chronic care demonstration collaborative (Buikwe District) 8. Uganda integrate FP with ART services collaborative (Masaka District) 9. Uganda strengthen the performance of pharmaceutical human resources collaborative (3 districts) 10. Uganda community support to CHWs collaborative (Buikwe District) 11. Senegal community case management demonstration collaborative with ChildFund (2 districts) 12. Tanzania human resources collaborative (Tandahimba District) 13. Tanzania most vulnerable children demonstration collaborative (Bagamoyo District) 14. Tanzania district health management collaborative (Lindi Region) 15. Russia TB demonstration collaborative (Bryansk and Saratov oblasts) 16. Kenya antenatal care-PMTCT demonstration collaborative (Kwale District) 17. Kenya nutrition care in HIV (Nyanza Province) 18. Ethiopia CHW demonstration collaborative (Oromia Region) 19. Cote d’Ivoire pharmacy collaborative (Abidjan) 20. Mali postpartum family planning demonstration collaborative (Kayes Region) 21. Mali anemia prevention and control demonstration collaborative (Bougouni district)

HCI TO3 Performance Target	How the target was met by the end of FY14
	<p>22. Mali injection safety demonstration collaborative (Sikasso Region)</p> <p>23. Honduras obstetric referrals demonstration collaborative (Comayagua Region)</p> <p>24. Georgia NCD collaborative (Imereti Region)</p> <p>25. Malawi improve nutritional status of HIV patients collaborative (2 districts)</p> <p>26. Ukraine implementation of brief physician intervention to reduce alcohol consumption collaborative (Poltava Oblast)</p> <p>Level of improvement achieved in these collaboratives through the end of FY14 was presenting the TO3 FY12 and FY13 self-evaluation reports and in the FY14 Annual Project Report. Collaborative profiles on these phase I collaboratives were posted on the HCI Portal and transferred in FY14 to the USAID ASSIST website.</p>
<p>Performance target 4.2: The collaboratives supported under Task Order #3 will include at least one that addresses the current management processes of the district health team (or the local equivalent).</p>	<p>Target has been met:</p> <p>The human resources collaborative launched in Tandahimba District of Morogoro Region in Tanzania at the end of FY10 with TO3 funding addressed district-level health program management. The Regional and District Health Management Team collaborative started in Lindi, Tanzania in FY12 also focused on improving health management processes at the district level.</p>
<p>Performance target 4.3: At least four of the 20 collaboratives developed under Task Order #3 will be implemented by a partner organization, with the role of the contractor limited to providing training and support to the partner organization.</p>	<p>Target has been met:</p> <p>Four of the demonstration collaboratives supported under TO3 are implemented by a partner organization:</p> <ol style="list-style-type: none"> 1) Tanzania AIDS Relief Tanga Region ART/PMTCT collaborative 2) Tanzania Clinton Foundation/EGPAF Mtwara ART/PMTCT collaborative 3) Tanzania FHI 360 Morogoro ART/PMTCT collaborative 4) Tanzania EngenderHealth Infant Feeding Collaborative in Iringa
<p>Performance target 4.4: At least four of the collaboratives developed under Task Order #3 will address the chronic care of HIV/AIDS across the continuum of care, from the level of self-care to referral hospital care. At least three of these collaboratives will be in Africa. Before the end of Task Order #3, the contractor will submit a report summarizing the improvement of the application of the chronic care model to AIDS in African countries.</p>	<p>Target has been met:</p> <p>Five collaboratives developed under TO3 address the chronic care of HIV across the continuum of care, four of which are in Africa:</p> <ol style="list-style-type: none"> 1) Nicaragua ART 2) Uganda palliative care 3) Uganda chronic care 4) Tanzania patient-self management activity within the Morogoro ART/PMTCT collaborative 5) Malawi nutritional status of HIV patients <p>HCI published a report summarizing the application of the chronic care model to AIDS in African countries in December 2013.</p>
<p>Performance target 4.5: During the course of Task Order #3, the contractor will carry out at least six</p>	<p>Target has been met:</p> <p>Seven studies were completed by the end of FY13:</p> <ol style="list-style-type: none"> 1) Tanzania: Evaluation of the Partnership for Quality Improvement (partner collaborative) strategy was completed in FY10 and the report, <i>The Partnership for</i>

HCI TO3 Performance Target	How the target was met by the end of FY14
<p>descriptive or intervention studies focused on the design and implementation of improvement collaboratives.</p>	<p><i>Quality Improvement to Improve PMTCT and ART Services in Tanzania: Assessment of Results, Capacity, and Potential for Institutionalization</i>, was published in June 2011.</p> <p>2) Ecuador: Sustainable scale-up of AMTSL (completed in FY11 and published in <i>Int J Gyn Obst</i> in June 2012).</p> <p>3) Uganda: Effectiveness of different coaching strategies on QI team performance (study completed in FY11; the report, <i>Comparison of Coaching Strategies for Improvement Collaboratives in Ugandan HIV/AIDS Health Centers</i>, was published in March 2012)</p> <p>4) Guatemala: Descriptive study of QI team performance (completed in FY11 and the summary report, <i>Quality improvement team performance in Guatemala</i>, was published in September 2011 along with the full study report in Spanish)</p> <p>5) Afghanistan: Qualitative assessment of community-based services for EONC in Kunduz Province (published in June 2012)</p> <p>6) Afghanistan: Changes in maternal and neonatal health in Kunduz Province as a result of a community-based collaborative improvement intervention (report was prepared as a manuscript and submitted for peer-reviewed publication)</p> <p>7) Afghanistan: <i>Changes in maternal and neonatal health in Balkh province, Afghanistan: Results from household surveys 2010 – 2012</i> discussing the impact of quality improvement methods to community level services in Balkh Province, Afghanistan was submitted to the COR for approval in September 2013. The manuscript will be submitted to the <i>Pakistan Journal of Public Health</i>.</p>
<p>Objective 5: Expand experience with the spread collaborative approach in USAID-assisted countries</p>	
<p>Performance target 5.1: The contractor will develop 20 spread collaboratives adapted to the needs of the involved health system, including those developed under Task Order #1, and support them for an average of two and a half years. In reporting on these collaboratives, the contractor will provide an estimate of the total population in catchment area of the participating facilities, with a target of at least 100,000 for the average population served. The contractor will also provide a count of the number of facilities reached by the spread collaborative, with a target average number of facilities of at least 50. Reports will also summarize the level of quality attained for each collaborative indicator, with comparison values from the corresponding Phase I (improvement) collaborative.</p>	<p>Target has been met:</p> <p>HCI supported 10 phase II spread collaboratives under TO1; 12 new phase II (spread) improvement collaboratives were initiated under TO3 through the end of FY14:</p> <ol style="list-style-type: none"> 1. Bolivia TB DOTS spread collaborative in El Alto, La Paz Province, including 47 facilities 2. Bolivia TB spread collaborative in the city of Cochabamba, including 38 facilities and 16 laboratories 3. Afghanistan maternal and newborn health facility spread collaborative in Parwan, Bamyán and Herat provinces, involving 27 facilities 4. Uganda HIV spread collaborative (96 sites, serving a population of 14 million) 5. Russia prevention of hypothermia among newborns spread collaborative in 25 facilities in Kostroma, Yaroslavl, Ivanovo, Tambov, Tula, and Tver oblasts 6. Russia breastfeeding spread collaborative in 17 facilities in Ivanovo, Tula, Tambov, and Kostroma oblasts 7. Russia spread collaborative on optimizing labor management through use of the partograph in 19 facilities in Kostroma, Yaroslavl, Ivanovo, Tambov, and Tula oblasts 8. Russia spread collaborative on prevention of unwanted pregnancies, abortions, and sexually transmitted diseases among teenagers in 10 facilities in Kostroma, Tambov, Ivanovo, and Tula oblasts 9. Russia spread collaborative on primary neonatal resuscitation in 19 facilities in Ivanovo, Tver, Tula, Tambov, Yaroslavl, and Kostroma oblasts 10. Russia regionalization of perinatal care in 20 facilities in Ivanovo, Tver, Tula, Tambov, Yaroslavl, and Kostroma oblasts

HCI TO3 Performance Target	How the target was met by the end of FY14
	<p>11. Afghanistan maternal and newborn health facility spread collaborative in Samangan, Sari Pul, Wardak, and Logar provinces, including 28 facilities</p> <p>12. Partner PMTCT spread collaborative in EGPAF-supported Kilimanjaro Region in Tanzania (EGPAF demonstration region: Mtwara), including 11 facilities</p> <p>Note: The facility essential obstetric and newborn care spread collaborative in Segou and Koulikoro regions of Mali was unable to be implemented due to the suspension of technical assistance activities in Mali from March-August 2012 as a result of the civil unrest. When activities resumed in FY13, HCI was unable to resume work in Segou and Koulikoro regions and instead was directed to focus on EONC activities in additional districts of Kayes Region.</p>
<p>Performance target 5.2: The contractor will conduct at least 18 descriptive or intervention studies addressing the design or implementation of spread activities, including those developed under Task Order #1. Studies of the spread process within improvement collaboratives may be counted toward achievement of this target.</p>	<p>Target has been met: HCI supported 6 studies on spread under TO1 and completed 12 more under TO3:</p> <ol style="list-style-type: none"> 1) Tanzania: Evaluation of the Partnership for Quality Improvement, the strategy for developing regional partner collaboratives (completed in FY10) 2) Towards more effective spread of improvement methods (completed in FY11) 3) Ecuador: Spread of EONC better care practices and CQI in 51 sites (completed in FY12) 4) Russia: Spread of innovations in MCH collaboratives through a web portal (completed in FY12) 5) Uganda: Spread of better care practices to improve coverage, retention, and outcomes of patients receiving ART (completed in FY12) 6) Guatemala: Spread of ProCONE best practices from health centers to health posts in San Marcos (completed in FY12) 7) Guatemala: Case study of spread from San Lorenzo health center to three peripheral facilities (completed in FY12) 8) Nicaragua: Spread of innovations in MNCH to new teams (completed in FY12) 9) Bolivia: Evaluation of methods used to spread learning from the El Alto TB collaborative to new sites in Cochabamba (completed in FY12) 10) Uganda: Diffusion and adaptation of innovations to improve care for HIV/AIDS patients in 14 health facilities in Uganda (completed in FY12) 11) Afghanistan: Evaluating spread of an MNCH improvement collaborative to Bamiyan, Herat, and Parwan provinces (completed in FY13) 12) Evaluation of the spread of EONC best practices from Niger to Mali (completed in FY13)
<p>Performance target 5.3: By the end of the second year of Task Order #3 (September 2011), the contractor will submit a report summarizing the status of spread activities to date, including the findings of studies and evaluations and major knowledge gaps</p>	<p>Target has been met: Drawing on the findings of the spread studies carried out by HCI, we commissioned an analytical report synthesizing our findings on spread by Dr. John Ovretveit. The final report was submitted to the COTR on September 29, 2011 and approved for publication on November 7, 2011.</p>
<p>Objective 6: Expand the experience base for other specific QI approaches</p>	

HCI TO3 Performance Target	How the target was met by the end of FY14
<p>Performance target 6.1: Under Task Order #3, the contractor will carry out 15 descriptive or intervention studies of QI methodologies distinct from the overall collaborative approach, including those begun under Task Order #1. These studies may address well-defined QI methodologies used within the framework of an improvement or spread collaborative.</p>	<p>Target has been met:</p> <p>Seven applications or evaluations of other QI approaches were completed by the end of FY10 under TO1; 12 additional studies and applications were completed under TO3 by the end of FY13, reaching a total of 19 studies. The studies of other QI methodologies than collaborative improvement that were carried out under HCI TO3 are:</p> <ol style="list-style-type: none"> 1) Field testing of the Framework for improving care and outcomes of patients on ART led to the development in FY11 of an instructional manual on how to apply the framework. The tool was published in August 2011. 2) Malawi HIV/AIDS quality of care assessment (report published in FY11) 3) Documentation of impact of OVC standards in Strengthening Community Safety Nets Project in Ethiopia with ChildFund (report published in November 2011) 4) Assessment of selected maternal newborn care practices in women of reproductive age in the Europe and Eurasia Region: This four-country assessment (data were collected in Albania, Armenia, Georgia, and Russia) was new in HCI's FY11 scope of work and was completed in September 2011. The final report was published in June 2012. 5) Assessment of the non-communicable disease screening and care practices in women of reproductive age in the Europe and Eurasia Region: This four-country assessment (data were collected in Albania, Armenia, Georgia, and Russia), implemented in conjunction with the maternal newborn care practices study, was designed and completed in FY11. The final report was published in April 2012. 6) Application of the Community Health Worker Assessment and Improvement Matrix (CHW AIM) in Madagascar: Data were collected in August 2011. The written report on the qualitative assessment conducted by HCI was published in November 2012. 7) Documentation of the ISO 9001:2008 certification for administrative, financial, and clinical services in Guatemala: A technical report describing the application of ISO 9001:2008 standards in the Ministry of Health of Guatemala was drafted and approved by the USAID Mission and the COTR. However, as a result of new certifications of compliance with ISO standards that took place in September, the Mission has request that HCI revise the report to include the new certification results. The revised report was published in September 2012. 8) Cost-effectiveness analysis of ISO 9001:2008 certification vs. collaboratives in Guatemala: Data collection for this study was completed in FY11, and the final report was published in June 2012. 9) Cost-effectiveness analysis of OVC standards development and piloting in Kenya: This study was carried out in FY11, and the final report was published in November 2011. 10) Application of the CHW Assessment and Improvement Matrix (CHW AIM) in Zambia: This application of the CHW AIM tool began in September 2010, with the participation of four NGOs and the Ministry of Health. Endline data collection took place in the first quarter of FY12. The report was published in June 2012. 11) Case Study on Piloting Standards in Kenya. Published in March 2012. 12) Hospital Accreditation Process Impact Evaluation in Indonesia was started by HCI in 2012. Baseline data were analyzed and reported to USAID under HCI in

HCI TO3 Performance Target	How the target was met by the end of FY14
	FY13. The mid line and end line data collection are being carried out under the USAID ASSIST Project.
<p>Performance target 6.2: Under Task Order #3, the contractor will carry out at least two comparative evaluations of the performance of providers participating in a collaborative, and that of a similar group, receiving traditional supervision for the same quality indicators.</p>	<p>Target has been met: Two comparative evaluations were carried out under HCI TO3:</p> <ol style="list-style-type: none"> 1) An evaluation and cost-effectiveness analysis of an improvement collaborative for eclampsia /pre-eclampsia services in Mali (Report published in FY14) 2) Comparison study on effects of a QI intervention on maternal and newborn outcomes in collaborative and non-collaborative sites in Uganda (report published in FY14)
<p>Objective 7: Improve the cost-effectiveness of QI in USAID-assisted countries</p>	
<p>Performance target 7.1: During the first year of Task Order #3, the contractor will submit to the USAID COTR a report summarizing the design of the knowledge management system, addressing at a minimum, certain features and capabilities.</p>	<p>Target has been met: A report summarizing the design, features, and capabilities of the HCI KM system was submitted to the COTR on 30 September 30, 2010.</p>
<p>Performance target 7.2: During the course of Task Order #3, the contractor will carry out 20 evaluations and studies addressing the design of the knowledge management system, user applications of system content for QI and validation of submissions, including those carried out under Task Order #1.</p>	<p>Target has been met: In addition to the 15 KM studies that were completed under TO1, five additional KM studies were completed in FY12:</p> <ol style="list-style-type: none"> 1) Bolivia: Evaluation of methods used to spread learning from the El Alto TB collaborative to new sites in Cochabamba (study completed in FY12; final report is in editing) 2) Survey of users of the CHW Central site (completed by Initiatives Inc. in November 2011) 3) Design of a Spanish-language community of practice for implementers of Kangaroo Mother Care (completed in June 2012) 4) Evaluation of a links to and referring websites for the HCI Portal, completed by CCP in June 2012 5) Best improvement report contest to increase outside submissions to HCI Improvement Database held in February 2012. Interviews with finalists were conducted in April 2012 to validate their submissions.
<p>Performance target 7.3: During the course of Task Order #3, the contractor will carry out 15 studies and evaluations related to improving the cost-effectiveness of specific QI approaches or methodologies, including those carried out under Task Order #1.</p>	<p>Target has been met: Ten cost-effectiveness studies were carried out under TO1; twelve more studies were completed through the end of FY14 under TO3.</p> <ol style="list-style-type: none"> 1) Cost-effectiveness of the conditional cash transfer intervention in Guatemala (completed in FY11) 2) Kenya: CEA of piloting OVC standards (completed in FY11 and report published in November 2011) 3) Uganda: Cost-effectiveness of central level vs. District coaching strategy (completed and report published in March 2012)

HCI TO3 Performance Target	How the target was met by the end of FY14
	<p>4) Ecuador: Spreading Evidence-Based Maternal and Newborn Care Practices and Continuous Quality Improvement in Ecuador: A Temporal Comparison (study completed in FY13)</p> <p>5) Guatemala CEA of ISO versus collaboratives (report published in June 2012)</p> <p>6) Nicaragua: The cost-savings of implementing Kangaroo mother care in Nicaragua. A manuscript describing these findings was submitted to the <i>Pan American Journal of Public Health</i> in October 2012 and accepted for publication in September 2013: <i>Rev Panam Salud Pública</i>_2013 Sep;34(3):176-82.</p> <p>7) Cost-effectiveness of improving services to people with HIV in Nicaragua. A manuscript describing the findings of this study was submitted to the <i>Journal of the International AIDS Society</i> in September 2012 but was not accepted for publication. The Spanish version of the report was published in March 2012 and disseminated in Nicaragua.</p> <p>8) Cost-effectiveness of the improvement collaborative approach in the context of hospital-level maternity services in Kabul Afghanistan. The final report of this study was submitted to the COR for approval in September 2013.</p> <p>9) How accurate are medical record data in Afghanistan’s maternal health facilities? A manuscript describing the findings of this study was accepted for publication in <i>BMJ Open</i> in March 2013 and is accessible at: http://bmjopen.bmj.com/content/3/4/e002554.full.</p> <p>10) A comparative evaluation and cost-effectiveness analysis of collaborative improvement for maternal and newborn care services in Uganda. The study was completed in FY13. The report was completed in FY14.</p> <p>11) Cote d’Ivoire: Cost-effectiveness of HCI-implemented QI interventions to improve quality of HIV-related care. HCI partnered with Harvard University to conduct this study, which was completed in the last quarter of FY14.</p> <p>12) An evaluation and cost-effectiveness analysis of an improvement collaborative for eclampsia /pre-eclampsia services in Mali. The cost-effectiveness analysis of the Mali comparison study was completed in the last quarter of FY14.</p>
<p>Performance target 7.4: By the end of Task Order #3, the KM system has been accessed by at least 2000 users, 75 acceptable submissions from outside the Task Order have been received and posted and the contractor has responded to 400 requests for information or assistance.</p>	<p>Target has been met:</p> <p>By the end of FY12, the HCI Portal had been accessed by 140,579 unique visitors, with an average daily visit of about 200.</p> <p>The Spanish maternal and child health web site (www.maternoinfantil.org) has had over 200,000 visits since its launch in FY09, with an average over 400 daily visits in 2012.</p> <p>As of the end of FY12, the KM system has received 122 acceptable submissions from outside the Task Order that have been posted in the Improvement Database.</p> <p>By the end of FY12, HCI had received and responded to 288 substantive requests for assistance through the various knowledge management websites supported by the project (excluding requests for password or login help). The target of 400 requests was not reached in FY12 due to lack of spontaneous requests.</p> <p>Because this last target was demand-driven, the USAID COR determined in April 2013 that this particular component of Performance Target 7.4 of HCI TO3 had indeed been satisfactorily met by HCI’s response rate at or near 100% of received requests.</p>

HCI TO3 Performance Target	How the target was met by the end of FY14
<p>Performance target 7.5: By the end of Task Order #3, the contractor has prepared a paper summarizing the KM system and its performance and submitted the paper to a peer-reviewed professional journal.</p>	<p>Target has been met.</p> <p>An article summarizing the experience of the HCI KM system was submitted to the COR for approval to submit for publication on September 29, 2014.</p>
<p>Objective 8: Provide global technical leadership for QI in USAID-assisted countries</p>	
<p>Performance target 8.1: By the end of Task Order #3 received written confirmation from no fewer than five international organizations with objectives in health systems strengthening that they will incorporate language that explicitly endorses QI as a strategy for achieving these objectives.</p>	<p>Target has been met. By the end of FY14 under TO3, we had written confirmation from five international organizations:</p> <ol style="list-style-type: none"> 1) The Directors' Joint Consultative and East, Central, and Southern Africa Community (ECSA) Health Ministers' mechanisms (the highest technical and policy making organs of ECSA countries). 2) International Society for Quality in Health Care, which has signed a written agreement with URC to collaborative on promotion of quality and patient safety approaches through regional workshops and other events 3) Salzburg Global Seminar, which convened the Salzburg Seminar "Making Health Care Better in Low and Middle Income Economies" in April 2012. The Salzburg Statement issued by the participants in the seminar explicitly endorses QI as a strategy the statement was signed by representatives from 25 government ministries and international organizations. 4) Regional Psychosocial Support Initiative (REPSSI) headquartered in South Africa 5) African Network for the Prevention and Protection against Child Abuse and Neglect (ANPPCAN), headquartered in Nairobi, Kenya <p>With REPSSI and ANPPCAN, HCI established regional and country Partnerships for Child Protection, aimed at spreading the adoption of improvement methods to improve outcomes for vulnerable children. Both organizations have begun applying improvement methods beyond the initial scope of activities funded through HCI. Partnership activities are expected to continue under USAID ASSIST Project funding in FY15.</p>
<p>Performance target 8.2: By the end of Task Order #3, the contractor will produce 20 technical reports and papers related to describing QI interventions and measuring their results, including seven papers published in peer-reviewed journals, as well as those produced under Task Order # 1.</p>	<p>Target has been met:</p> <p>By the end of FY11, under TO1, HCI had published seven articles in peer-reviewed journals and 15 technical reports describing QI interventions and results. Under TO3 through FY14, HCI has published 12 more articles in peer-reviewed journals and 44 additional technical and research reports describing the interventions and results of QI:</p> <p>Technical and research reports:</p> <ol style="list-style-type: none"> 1) A Rapid Evaluation of the Uganda MoH Training Program on Use of HIV Monitoring Tools (June 2010) 2) Evaluation of the Scale-up of the PMTCT Infant Feeding Counseling Program in Tanzania (September 2010) 3) A Summary of Results and Lessons from HIV Training Evaluations (September 2010)

HCI TO3 Performance Target	How the target was met by the end of FY14
	<p>4) Sustaining Better Maternal and Newborn Care and Quality Improvement in Niger: Challenges and Successes (March 2011)</p> <p>5) Sustainability of Improvements in Maternal and Child Care and Institutionalization of Continuous Quality Improvement in Nicaragua (May 2011)</p> <p>6) Institutionalization of Continuous Quality Improvement in AMOCSA, a Private Health Care Provider in Chinandega, Nicaragua (May 2011)</p> <p>7) The Partnership for Quality Improvement to Improve PMTCT and ART Services in Tanzania: Assessment of Results, Capacity, and Potential for Institutionalization (June 2011)</p> <p>8) Aligning and Clarifying Health Worker Tasks to Improve Maternal Care in Niger (August 2011)</p> <p>9) Postpartum Family Planning Intervention for At-risk Women in Masaya and Rivas, Nicaragua (August 2011)</p> <p>10) Results from the Pilot Phase of an ART/PMTCT Improvement Collaborative in Cote d'Ivoire (September 2011)</p> <p>11) Expanding TB-HIV Integration and Public-Private Mix Interventions to Nam Dinh and Hai Duong Provinces, Vietnam (September 2011)</p> <p>12) How do quality improvement teams function after an improvement intervention ends? A description of team performance after the end of an obstetric and newborn care QI initiative in Niger (September 2011)</p> <p>13) Institutionalization of continuous quality improvement interventions on maternal and child health in Honduras (September 2011)</p> <p>14) Spreading best practices in maternal and newborn care in Guatemala (September 2011)</p> <p>15) Implementing Standards-based Quality Improvement Processes at the Community Level for Orphans and Vulnerable Children: The Strengthening Community Safety Nets (SCSN) Project, Ethiopia (October 2011)</p> <p>16) Implementation of Standards of Service Delivery for Orphans and Vulnerable Children in Kenya: A Prospective Evaluation of Performance, Costs, and Equity (November 2011)</p> <p>17) USAID's Legacy of Family Planning Technical Assistance to the Guatemalan Public Health Sector: Over a decade of success through USAID's Calidad en Salud and Health Care Improvement Projects (January 2012)</p> <p>18) Improving Care for Vulnerable Children in Kenya: Results from Piloting Service Standards (March 2012)</p> <p>19) Integrating Nutrition Interventions into Routine HIV/AIDS Care: Challenges, Solutions, and Lessons Learned from Uganda (May 2012)</p> <p>20) Taking Every Opportunity to Save Lives: The Role of Modern Quality Improvement in Enhancing Maternal, Newborn, and Child Health Programs. A Synthesis of USAID Health Care Improvement Project Field Experience (June 2012)</p> <p>21) Comparative Evaluation of Collaborative Improvement and ISO Certification to Improve Quality of Maternal and Neonatal Care in Guatemala (June 2012)</p> <p>22) The Human Resources Collaborative: Improving Maternal and Child Care in Niger (September 2012)</p> <p>23) Improving the Health System through Certification: Implementing ISO 9001:2008 in Guatemala (September 2012)</p>

HCI TO3 Performance Target	How the target was met by the end of FY14
	<p>24) Integrating palliative care with HIV care in two Ugandan districts using a collaborative quality improvement approach (March 2013)</p> <p>25) Improving quality of HIV services and health worker performance in Tandahimba District, Tanzania: An evaluation (July 2013)</p> <p>26) Namibia Integrated Health Care Waste Management Plan. Final Project Report. (October 2012)</p> <p>27) Integrating palliative care with HIV care in two Ugandan districts using a collaborative quality improvement approach. Technical Report. (March 2013)</p> <p>28) Rahimzai M, Yaqubi E. September 2013. Technical Assistance in Health Care Improvement to the Ministry of Public Health of the Islamic Republic of Afghanistan. Final Report. (Submitted it to the Ministry of Public Health for final approval.)</p> <p>29) Institutionalization of Quality Improvement Approaches and Results in Former USAID-assisted Regions in Russia. Research and Evaluation Report. (December 2012)</p> <p>30) What has HCI done to institutionalization improvement? A report from 17 countries. Research and Evaluation Report. (March 2013)</p> <p>31) Spread of EONC Best Practices from Niger to Mali. Research Report Summary. (April 2013)</p> <p>32) Dissémination du Niger au Mali du collaboratif d'amélioration des soins obstétricaux et néonataux essentiels et des meilleures pratiques du collaboratif: expériences, perceptions et efficacité. Rapport de la Recherche et Evaluation. (April 2013)</p> <p>33) Improving quality of HIV services and health worker performance in Tandahimba District, Tanzania: An evaluation. Research and Evaluation Report. (July 2013)</p> <p>34) Cost-effectiveness analysis of improving maternity hospital care in Kabul, Afghanistan. Research and Evaluation Report. (Submitted to the COR in September for approval.)</p> <p>35) Ikram AN, Sahak I, Anwari MK, Majeedi AJ, Saleem H, Smith S. September 2013. Evaluating the spread of the maternal and newborn health care collaborative to Bamyán, Herat, and Parwan provinces in Afghanistan. Research and Evaluation Report. (Submitted to the COR in September 2013 for approval.)</p> <p>36) Applying the Chronic Care Model to Health System Design in Low-resource Settings: Lessons from HIV Improvement Interventions. <i>Technical Report</i> (December 2013)</p> <p>37) Facteurs influençant la sortie des patients vivant avec le VIH du circuit de traitement en Côte d'Ivoire. <i>Rapport de Recherche et Evaluation</i>. (January 2014)</p> <p>38) Factors Associated with Loss to Follow-up Status among ART Patients in Cote d'Ivoire. <i>Research Report Summary</i>. (January 2014)</p> <p>39) Nyagawa F, Kamote E, Sono K, Mussanga J, Chamrad D, Coly A, Mwita S. 2014. Perceived Impact of Quality Improvement Trainings on the Care and Support of Most Vulnerable Children and their Households in Tanzania. <i>Research and Evaluation Report</i>. (January 2014)</p> <p>40) Improving community support for health extension workers in Ethiopia. <i>Technical Report</i> (April 2014)</p>

HCI TO3 Performance Target	How the target was met by the end of FY14
	<p>41) Operationalizing the WHO 2010 Guidelines on the Prevention of Mother-to-Child Transmission (PMTCT) of HIV and Infant Feeding in Three Health Care Facilities in Tanzania. <i>Technical Report</i> (May 2014)</p> <p>42) A comparative evaluation and cost-effectiveness analysis of collaborative improvement for maternal and newborn care services in Uganda. <i>Research and Evaluation Report</i>. (September 2014) (Submitted to the COR in September 2014 for approval.)</p> <p>43) An Evaluation and cost-effectiveness analysis of a collaborative improvement intervention for pre-eclampsia/eclampsia care in Mali. <i>Research and Evaluation Report</i>. (September 2014) (Submitted to the COR in September 2014 for approval.)</p> <p>44) Impact and cost of an HIV/AIDS improvement intervention in Côte d'Ivoire. <i>Research and Evaluation Report</i>. (September 2014) (Submitted to the COR in September 2014 for approval.)</p> <p>Twelve articles on QI results have been published in peer-reviewed journals under TO3:</p> <ol style="list-style-type: none"> 1) Broughton E. How & Why of CEA. Published in <i>Int J Clinical Pathways</i> in September 2011. 2) Hermida J et al. Sustainable scale-up of AMTSL in Ecuador. Published in <i>Int J Gyn. Obs.</i> in June 2012. 3) Rahimzai M, Amiri M, Burhani N, Leatherman S, Hildebeitel S, Rahimzai A. Afghanistan's National Strategy for Improving Quality in Health Care. Published 12 March 2013 in <i>International Journal for Quality in Health Care</i> pp. 1-7 10.1093/intqhc/mzt013. 4) Lopez S. Wong Y. Gomez I. Escobar F. Tinoco B. Parrales A. Quality in Practice: Preventing and managing neonatal sepsis in Nicaragua. Published 20 August 2013 in <i>Int J Quality in Health Care</i> pp. 1-7 10.1093/intqhc/mzt060. 5) Broughton E, Ikram AN, Sahak I. How Accurate Are Medical Record Data in Afghanistan's Maternal Health Facilities? Accepted for publication March 21, 2013 in <i>BMJ Open</i>. 6) Edward Broughton E, López SR, Aguilar MN, Somarriba MM, Pérez M, Nieves S. Economic analysis of a pediatric ventilator-associated pneumonia prevention initiative in Nicaragua. Published 2012 in the <i>International Journal of Pediatrics</i>. doi:10.1155/2012/359430. 7) Altaf A, Vaid S. The Sindh Disposable Syringe Act: putting the act together. <i>Journal of the Pakistan Medical Association</i>. Accepted on 8/25/13 for publication in the November 2013 issue. 8) Tawfik Y, Rahimzai M, Ahmadzai M, Clark A, Kamgang E. Integrating Family Planning in Postpartum Care through Quality Improvement: Experience from Afghanistan. <i>Glob Health Sci Pract.</i> 2(2):226-233. Published 13 May 2014. Available at: http://dx.doi.org/10.9745/GHSP-D-13-00166. 9) Broughton EI, Nunez D, Moreno I. Cost-Effectiveness of Improving Health Care to People with HIV in Nicaragua. <i>Nursing Research and Practice</i>. Published 25 May 2014. Article ID 232046, 6 pages, 2014. doi:10.1155/2014/232046. Accessible at: http://www.hindawi.com/journals/nrp/2014/232046/ 10) Jennings L, Yebadokpo A, Affo J, Agbogbe M. Use of job aids to improve facility-based postnatal counseling and care in rural Benin. <i>Maternal and Child Health Journal</i>. doi:10.1007/s10995-014-1537-5. Accepted for publication 30 May 2014.

HCI TO3 Performance Target	How the target was met by the end of FY14
	<p>11) Mwaniki MK, Vaid S, Chome IM, Amolo D, Tawfik Y. Improving service uptake and quality of care of integrated maternal health services: The Kenya Kwale District Improvement Collaborative. <i>BMC Health Services Research</i> 14:416. Available at: http://www.biomedcentral.com/1472-6963/14/416.</p> <p>12) Rahimzai M, Naim AJ, Holschneider S, Hekmati AK. Engaging frontline health providers in improving the quality of health care using facility-based improvement collaboratives in Afghanistan: Case study. Accepted for publication in <i>Conflict and Health</i> in September 2014. Manuscript number: 5641720412983154</p>
<p>Performance target 8.3: By the end of Task Order #3, the contractor will facilitate at least 15 articles or broadcasts in mass media that address the nature of QI activities and their results, including those facilitated under Task Order #1.</p>	<p>Target has been met.</p> <p>HCI facilitated nine articles and broadcasts in mass media addressing the nature of QI activities and their results under TO1 by the end of FY11. By the end of FY12, we had facilitated 17 new mass media articles and broadcasts under TO3:</p> <ol style="list-style-type: none"> 1. Article in the Guatemalan newspaper <i>Prensa Libre</i> on Helping Babies Breathe (February 2011) 2. Article in the Tver newsweekly <i>Rzhevsky Vestnik</i> on QI in obstetric care supported by HCI (February 2011) 3. In March 2011, a conversation between the CSIS panel moderator (Judyth Twigg), Victor Boguslavsky, and former Senator Bill Frist was posted on the CSIS website, at: http://csis.org/multimedia/interview-senator-bill-frist-and-dr-victor-boguslavsky-us-russia-collaboration-health. 4. In Afghanistan, three episodes of the “Families Health” television show highlighted quality improvement efforts supported by HCI (episodes aired in May, August, and September 2011) 5. HCI’s Health Workforce team contributed a short piece on applying QI to human resources management and a Niger case for the State of the World’s Midwifery Report, which was launched in June 2011 in Johannesburg. The piece on application of QI to human resources for health is on p. 116 of the main report. The Niger country profile prepared by HCI is available at: http://www.unfpa.org/sowmy/resources/docs/country_info/short_summary/Niger_SoVMyShortSummary.PDF. 6. HCI/Russia staff and project federal-level experts were interviewed by the Ren-TV Bryansk regional channel, a local TV channel, about tuberculosis project activities in Bryansk oblast, in July 2011. 7. Many Afghani television stations highlighted the launch ceremony of the National Strategy for Improving Quality in Health Care in news segments on August 8, 2011. 8. ISQua Talk, “Heal Me But Don’t Kill My Culture” delivered by Dr. Jorge Hermida and videotaped at the ISQua conference in Hong Kong in September 2011 and posted on the ISQua Knowledge web portal at: http://www.isquaknowledge.org/activities/isqua-talks/jorge-hermida.html. 9. TV broadcast on Moscow station of First Lady of Russia touring hospital with newborn resuscitation equipment provided by HCI (October 11, 2011) 10. On Jan. 27, 2012, HCI staff member Emily Treleaven posted a blog on the Healthy Newborn Network website about HCI’s work to scale up Kangaroo Mother Care in Central America, “Connecting Across Borders to Improve Kangaroo Mother Care”, at: http://www.healthynewbornnetwork.org/blog/connecting-across-borders-improve-kangaroo-mother-care

HCI TO3 Performance Target	How the target was met by the end of FY14
	<p>11. On March 14, 2012, “Meditsinskaya Gazette” (Medical Gazette) published a full page article “Green light to discussions: crucial issues of quality and safety in healthcare in Russia” to feature the International Forum Remote Participation Session and highlight its role in disseminating modern approaches to quality improvement to the Russian healthcare community.</p> <p>12. Article “When Patients Become Experts” about patient self-management improvement work in Morogoro, Tanzania published on the web magazine, <i>Global</i>, on 19 April 2012.</p> <p>13. Salzburg discussion forum and daily updates from Salzburg Global Seminar, “Making Health Care Better in Low and Middle Income Economies: What are the next steps and how do we get there?”, posted on the ISQua Knowledge website 20 March –30 April 2012</p> <p>14. On April 15, 2012, a story was posted on the USAID Afghanistan website about HCI’s work to improve care for newborns in respiratory distress: http://afghanistan.usaid.gov/en/USAID/Article/2677/Helping_Afghan_Babies_Breathe</p> <p>15. Blog about Salzburg posted on the K4Health website on 22 May 2012 at: http://www.k4health.org/blog/post/we-can-make-health-care-better-salzburg-call-action.</p> <p>16. On June 18, 2012, the Women Deliver website featured a story about HCI’s support for the scale-up of AMTSL in Ecuador: http://www.womendeliver.org/updates/entry/celebrate-solutions-ecuadors-health-system-model-reduces-maternal-mortality.</p> <p>17. On June 21, 2012, the second learning session of the Georgia non-communicable disease improvement collaborative was featured on three national and 1 regional TV channels in Georgia, highlighting the USAID-support for improving quality of care in Georgia. One of the clips can be viewed at: http://www.youtube.com/watch?v=QoWX6NvN9Lw&feature=share.</p>
<p>Performance target 8.4: By the end of Task Order #3, the contractor will support the development of new graduate-level training programs in QI as applied in low- and middle-income countries, or the revision of established programs in three training institutions located in these countries.</p>	<p>Target has been met.</p> <p>Through the end of FY13 under TO3, we developed four graduate level training programs in QI:</p> <ol style="list-style-type: none"> 1) QI curriculum developed by Dr. Stephen Kinoti for the new medical school in Kenya: the Kenya Methodist University Medical School. This new medical school opened in 2011. 2) In Nicaragua, the HCI team developed in FY12 a national curriculum for pre-service and in-service training with the Ministry of Health and with the National Universities in Managua and Leon. During FY13, HCI will support the expansion of the curriculum to six public and private universities. 3) In South Africa, Dr. Donna Jacobs developed a one-week QI course with the School of Public Health of the University of Witwatersrand in Johannesburg. The course, aimed at MPH students, is offered annually. It was first offered in August 2010 and again in August 2011, with instruction led by HCI staff and with support from the Director of the Quality Assurance Department of the National Department of Health. 4) Dr. Sonali Vaid developed an online QI module for the People’s Uni in FY13.

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