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USAID HEALTH CARE IMPROVEMENT PROJECT TASK ORDER 1

FY09 ANNUAL PROJECT REPORT

Contract Number GHN-I-01-07-00003-00

Performance Period:
October 1, 2008–September 30, 2009

December 21, 2009

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Front cover:

In Nicaragua, nursing school faculty receive practical training from HCI to enable them to teach nursing students to perform newborn resuscitation according to the Ministry of Health's quality standards. *Photo by Yudy Wong, URC.*

Children in Nigeria identify what they need to become responsible adults. Through the Care That Counts Initiative, HCI is working with stakeholders and implementers of programs serving orphans and vulnerable children to develop quality standards that address both desired outcomes and children's perceived needs and concerns. *Photo by Dorcas Amolo, URC.*

HCI organized a rapid survey of the occurrence of multi-drug resistant and extensively drug resistant (MDR/XDR) tuberculosis in Swaziland; findings helped accelerate completion of this state-of-the-art TB hospital in Manzini with isolation space for patients with drug resistant TB. *Photo by Samson Haumba, URC.*

A lay nurse aide in Benin uses an HCI-developed job aid to counsel a recently delivered woman. HCI completed a study this year that documents the effectiveness of task-shifting and job aids to improve the quality of counseling. *Photo by Larissa Jennings, URC.*

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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

AIDS	Acquired immunodeficiency syndrome
AME	Annual medical examination
AMTSL	Active management of the third stage of labor
ANC	Antenatal care
AQIAVC	African Quality Improvement Alliance for Vulnerable Children
ART	Antiretroviral treatment
ARV	Antiretroviral
BCC	Behavior change communication
CBO	Community-based organization
CBT	Computer-based training
CCP	Center for Communication Programs
CCTP	Conditional Cash Transfer Program
CD-ROM	Compact disk read-only memory
CDC	Centers for Disease Control and Prevention
CHMT	Council Health Management Team (Tanzania)
CHW	Community health worker
CME	Continuing medical education
CPT	Cotrimoxazole preventive therapy
CQI	Continuous quality improvement
C&T	Counseling and testing
CHW	Community health worker
CTC	Care and Treatment Center (Tanzania)
CTO	Cognitive Technical Officer
DHT	District Health Team
DOTS	Directly observed therapy, short course
DQIT	District quality improvement team
DST	Drug susceptibility testing
DSW	Department of Social Welfare
EGPAF	Elizabeth Glaser Pediatric AIDS Foundation
EONC	Essential obstetric and newborn care
FHI	Family Health International
FP	Family planning
FY	Fiscal year
GCS	*Gestión y Calidad en Salud* (Health Management and Quality Project) (Bolivia)
HBC	Home-based care
HCI	Health Care Improvement Project
HIV	Human immunodeficiency virus
HQ	Headquarters
HR	Human resources
HRH	Human Resources for Health
HSA	Health service area (Lesotho)
HTC	HIV Testing and Counseling Project
IBP	Implementing Best Practices Initiative
IC	Infection control
ICAP	International Center for AIDS Care and Treatment Programs at Columbia
IDU	Intravenous drug user
IEC	Information, education, and communication
IF	Infant feeding

IHI	Institute for Healthcare Improvement
IMCI	Integrated management of childhood illness
IMNCI	Integrated management of neonatal and childhood illness
INSS	Nicaraguan Social Security Institute
IPT	Isoniazid preventive therapy
IPTp	Intermittent preventive therapy for malaria in pregnancy
ISO	International Organization for Standardization
IUATLD	International Union Against Tuberculosis and Lung Disease
JSI	John Snow Inc.
KM	Knowledge Management
KNCV	Royal Netherlands Tuberculosis Association
LAC	Latin American and Caribbean
LQAS	Lot Quality Assessment Sampling
LS	Learning session
MCH	Maternal and child health
MCHIP	Maternal and Child Health Integrated Program
MDG	Millennium Development Goal
MDR	Multidrug-resistant
MDT	Multi-disciplinary team
MGCCD	Ministry of Gender Child and Community Development (Malawi)
MLS	Ministry of HIV/AIDS (Cote d'Ivoire)
MMAS	Ministry of Women and Social Action (Mozambique)
MNCH	Maternal, newborn, and child health
MOH	Ministry of Health
MOPH	Ministry of Public Health (Afghanistan)
MOHSD	Ministry of Health and Social Development (Russian Federation)
MOHSS	Ministry of Health and Social Services
MOHSW	Ministry of Health and Social Welfare
NACP	National AIDS Control Programme (Tanzania)
NDOH	National Department of Health (South Africa)
NGO	Nongovernmental organization
NRL	National Reference Laboratory
NTCP	National Tuberculosis Control Program
NTP	National Tuberculosis Program
OGAC	Office of the Global AIDS Coordinator (Department of State)
OHA	Office of HIV/AIDS
OJT	On-the-job training
OVC	Orphans and vulnerable children
P4P	Pay for performance
PAHO	Pan American Health Organization
PAI	PharmAcess International (Dutch organization working in Tanzania)
PEPFAR	President's Emergency Plan for AIDS Relief
PFP	Private-for-Profit
PHC	Primary Health Care
PHI	Pediatric hospital improvement
PISAF	*Projet Intégré de la Santé Familiale* (Integrated Family Health Project) (Benin)
PLWHA	Persons living with HIV/AIDS
PMTCT	Prevention of mother-to-child transmission of HIV
PNOEV	National Program for the Care of OVC (Cote d'Ivoire)
PNPEC	National Program of HIV/AIDS Case Management (Cote d'Ivoire)

POPPHI	Prevention of Post-partum Hemorrhage Initiative
PPH	Post-partum hemorrhage
PPM	Public-private mix
QAID	Quality Improvement and Assurance Department
QI	Quality improvement
QMAS	Quality management assurance system
RAAN	North Atlantic Autonomous Region (Nicaragua)
RAAS	South Atlantic Autonomous Region (Nicaragua)
RAMNI	Accelerated Reduction of Maternal and Newborn Mortality (Honduras)
RCQHC	Regional Center for Quality of Health Care
RDS	Respiratory distress syndrome
R&E	Research and evaluation
RH	Reproductive health
RHMT	Regional Health Management Team
RUTF	Ready-to-use therapeutic food
SES	Standard Evaluation System
SILAIS	Local Integrated Health Care System (Nicaragua)
SNAP	Swaziland National AIDS Programme
SSH	Secretariat of Health (Honduras)
STI	Sexually transmitted infection
TA	Technical assistance
TAG	Technical Advisory Group
TB	Tuberculosis
TBCAP	Tuberculosis Control Assistance Program
TO1	Task Order 1
TO3	Task Order 3
TOT	Training of trainers
TWG	Technical working group
UGM	University of Gadjah Mada (Indonesia)
UNICEF	United Nations Children's Emergency Fund
URC	University Research Co., LLC
USAID	United States Agency for International Development
USG	United States Government
VAAC	Vietnam Administration for HIV/AIDS Control
VCT	Voluntary Counseling and Testing
VHW	Volunteer health worker
WHO	World Health Organization
XDR	Extensively drug-resistant

Executive Summary

University Research Co., LLC (URC) and its subcontractor team completed the second year of implementation of the USAID Health Care Improvement (HCI) Project Task Order 1 on September 30, 2009. The year was marked by continued rapid expansion in both the country programs' size and the number of field and headquarters activities.

Under Task Order 1 (TO1) in Year Two, HCI provided technical assistance in quality improvement (QI) or conducted research in 26 countries, including ten (Afghanistan, Bolivia, Guatemala, Indonesia, Kenya, Malawi, Mali, Mozambique, Nepal, and Nigeria) that had not had HCI assistance in Year One. The new programs apply modern QI methods to maternal and newborn care at the facility and community levels (Afghanistan and Mali); tuberculosis case-finding and directly observed treatment (Bolivia and Indonesia); maternal and newborn care, conditional cash transfer programs, and redesign of Ministry of Health management systems according to international quality management standards (Guatemala); programs serving orphans and vulnerable children (Kenya, Malawi, Mozambique, and Nigeria); and strengthening community health worker programs (Nepal).

Most field programs continuing from Year One expanded their activities in Year Two, including the addition of a large activity in Russia to improve care for mothers and infants in three oblasts. Our Tanzania strategy of developing regional improvement collaboratives on antiretroviral therapy (ART) and prevention of mother-to-child transmission yielded three new collaboratives with three different implementing partners. Nicaragua added a new collaborative to improve care and treatment for patients on ART, applying HCI's Framework for Improving Care for Patients on ART. New collaboratives in Uganda will apply the Framework next year. Our Lesotho operations ceased at the end of FY09 when a new bilateral assumed support for TB-HIV activities.

A new focus in our work planning and reporting this year connects our improvement work with gains in attaining five Millennium Development Goals (MDGs), the prevailing global framework for measuring improvements in health outcomes from donor-funded programs. Our contributions to MDGs were highlighted in our reporting to USAID beginning in FY09's third quarter, and these targets are now and integral part of our work plans.

In addition to country work programs, we made important progress in the implementation of two key areas in the HCI statement of work: the Standard Evaluation System (SES) for documenting project-supported QI activities and the global knowledge management system for making health care improvement information widely accessible. Data collection was completed for the formal field test of the SES, and nine countries are now using its team-level documentation and synthesis tools. The project's web-based knowledge management system, the Health Care Improvement Portal, was launched in late FY09 at www.hciproject.org. It offers an extensive section on methods, approaches, and resources for improving health care. Site users are posting reports on their health care improvement activities, resulting in a rich and broad-based source of information on QI in health care in developing countries.

With regard to HIV-AIDS specifically, HCI continued to field test the ART Framework in Nicaragua, Tanzania, and Uganda and developed evidence for the its utility in enabling facility-based teams and program managers to understand and tackle the critical gaps in coverage between patients 1) eligible for ART, 2) retained in care, and 3) showing improved clinical outcomes. With this evidence, team and managers can devise focused interventions that address the root causes of these gaps. The Global Fund's re-organization has delayed assistance in developing and field testing service quality indicators for HIV/AIDS, tuberculosis, malaria, and health systems strengthening, but resumption is expected in early 2010. The project's work to improve the quality of HIV services at peripheral health facilities expanded in Tanzania and Uganda, where a new laboratory collaborative was launched in August. Also, both countries are evaluating the effectiveness of their HIV training programs.

HCI's first collaborative to apply improvement methods to human resources (HR) management was launched this year in Niger. Now in its demonstration phase, it addresses health worker productivity, retention, and quality of services using employee engagement and team-based management approaches. Also in the HR arena, we developed a tool to assess the functionality of programs that use community health workers (CHWs) to deliver maternal and child health interventions; we have shared it with members of the CORE Group, the Maternal and Child Health Integrated Program (MCHIP), and other agencies working with CHWs and community case management; large-scale testing of the tool with USAID child survival implementing partners will begin in FY10.

The spread of better care practices and institutionalization of improved care and QI methods are the focus of two major, multi-year research studies begun this year in Ecuador and Niger. In FY09, the project's Research and Evaluation unit completed eight studies started in Year One, and initiated 22. This team worked closely with our field programs to develop country-specific research and an evaluation agenda that will yield 30–35 studies of varying length and scope in FY10.

HCI contributed to a number of international expert technical meetings convened by the World Health Organization (WHO), the Rockefeller Foundation, the World Bank, the World Alliance for Patient Safety, and other agencies. Two consultations focused on care checklists: A WHO technical consultation developing a safe childbirth checklist invited the participation of our maternal, newborn, and child health advisors, and the WHO and Harvard University Medical School commissioned HCI Director Dr. M. Rashad Massoud to develop a strategy on options for large-scale spread of care checklists. Drs. David Nicholas and Maina Boucar contributed to a meeting of international donors and technical leaders sponsored by the Rockefeller Foundation and the Institute for Healthcare Improvement (IHI) in Bellagio, to begin developing an international framework and methodology for accelerating efforts to address the quality of health care in developing nations.

We published 16 technical reports and articles and conducted 10 technical briefings for USAID and cooperating agency staff. Staff participated in the technical program of 15 international, regional, and national conferences in FY09, making 32 presentations on QI approaches and results.

In Year Two, the HCI TO1 portfolio grew from 16 countries to 26, and annual project expenditures grew from almost $14 million in Year One to $22 million in Year Two. To meet the expanding work load, the number of full-time staff positions globally rose this year from approximately 200 to 250 in FY09. The use of URC's subcontractors on the HCI IQC also increased sizably, with two full-time staff positions created for personnel from Initiatives Inc. and EnCompass, LLC.

With the rapid growth in field support through TO1, its expenditures were projected to reach the TO1 ceiling of $54 million early in FY10. USAID issued a request for a new HCI task order proposal in August. Task Order 3 (TO3) under the HCI Indefinite Quantity Contract was awarded in late September. The new task order has the same objectives as Task Order 1 but new performance targets. During FY10, task orders 1 and 3 will operate simultaneously while TO1 activities are completed.

1 Introduction

This second Annual Project Report for Task Order 1 (TO1) of the USAID Health Care Improvement Project (HCI) summarizes the project's key activities and results during the second year of implementation: October 1, 2008 through September 30, 2009 (FY09).

The report narrative has four sections: 1) reports on field support-funded country or regional technical assistance (TA) to improve health care; 2) project results that supported USAID's Global Health Elements; 3) activities carried out under the project's common agenda functions that benefit multiple countries; and 4) achievements against the project's Performance Tracking Plan, showing progress made toward the fulfillment of TO1 objectives and performance targets by the end of the contract's second year.

A new focus in our work planning and reporting this year connects our improvement work with gains in attaining the Millennium Development Goals (MDGs), particularly Goals 4–6. Since these goals are the prevailing global framework for measuring the improved health outcomes from donor-funded programs, the value of assessing our contributions to goal attainment is clear. Our contributions to MDGs 1, 2, 4, 5, and 6 were highlighted in our quarterly report to the Contracting Officer's Technical Representative beginning in the third quarter of FY09 and were included in our FY10 work plans. Table 1 summarizes how our field activities contribute to attainment of each relevant MDG by country.

Table 1: Contribution of HCI field activities to relevant Millennium Development Goals

MDG	How HCI country activities contribute to MDG attainment
MDG 1: Eradicate Extreme Poverty and Hunger	**Cote d'Ivoire**: Improve quality of programs targeting orphans and vulnerable children and develop guidelines and norms for OVC programs **Guatemala**: Reduce child malnutrition in children under two years by increasing and improving counseling that improves growth monitoring and promotion **Mozambique**: Improve standards for OVC services in: food and nutrition, shelter and care, protection, physical and mental health, and education **Uganda**: Support NuLife to increase frequency of nutritional status assessments in HIV patients and delivery of ready-to-use foods with poor nutritional status
MDG 2: Achieve Universal Primary Education	**Cote d'Ivoire:** Increase school enrollment for vulnerable children affected by HIV through introduction of evidence-based education standards **Mozambique:** Increase school enrollment for vulnerable children affected by HIV through introduction of evidence-based education standards **OVC Care That Counts (Ethiopia, Kenya, Malawi, Nigeria, Tanzania):** Increase school enrollment for vulnerable children affected by HIV through introduction of evidence-based standards in the area of education
MDG 4: Reduce Child Mortality	**Afghanistan**: Reduce neonatal deaths by improving quality of care at public and private health facilities, as well as community-based health services **Guatemala**: Reduce neonatal and child health mortality by improving integrated preventive health care for children under six covered by the Conditional Cash Transfer Program and by increasing immunizations among children under two years **Health workforce (Tahoua, Niger)**: Reduce infant mortality by improving maternal and newborn care and ensuring newborns receive the essential newborn care package by increasing health worker productivity and engagement **Honduras**: Improve EONC services through institutionalization of continuous quality improvement (CQI); reduce pneumonia and diarrhea; and improve referrals for obstetric and neonatal emergencies

MDG 4: Reduce Child Mortality, continued	**Nicaragua**: Reduce neonate mortality from sepsis, asphyxia and respiratory distress symptom; reduce pneumonia and diarrhea fatalities by training hospital providers on new IMCI guidelines; identify and treat infections during pregnancy; and prevent and control hospital nosocomial infections **OVC Care That Counts (Ethiopia, Kenya, Malawi, Nigeria, Tanzania):** Improve the quality of programs providing health, protection, food and nutrition, psychosocial support, shelter and care, education, and economic strengthening services **Russia**: Reduce (maternal and) infant mortality by ensuring sustainability of PMTCT services and programs to prevent child abandonment by developing a model for medical and social support for HIV-infected mothers and their newborns and by improving maternal, newborn, and child health services **Swaziland**: Reduce mortality by providing child-specific TB/HIV services through training; enable providers to provide Isoniazid preventive treatment to children under five; advise on decentralizing TB services to primary health clinics and expanding community-facility linkages; help increase ART in TB clinics; strengthen MDR-TB case management; and increase the capacity of national HIV and TB control programs to lead and manage the scale-up of adequate HIV and TB care and treatment services **Tanzania:** Improve pediatric HIV/AIDS care and treatment, ART coverage, patient retention and improved clinical outcomes; improve quality of infant and young child feeding to reduce AIDS mortality by expanding the use of job aids and training in antenatal care and PMTCT sites **Uganda**: Reduce infant mortality by improving early infant diagnosis of HIV
MDG 5: Improve Maternal Health	**Afghanistan**: Improve delivery care quality at public and private health facilities, as well as community-based health services **Guatemala**: Reduce maternal (and neonatal) mortality by scaling up best practices in essential obstetric and neonatal care at the primary, secondary, tertiary, and community levels and by improving access to and the quality of family planning services **Health workforce (Tahoua, Niger)**: Increase the percentage of skilled deliveries, reduce postpartum hemorrhage, and improve the quality of maternal hemorrhage case management in Tahoua; create a tool to count and assess new community health workers delivering MCH services **Honduras**: Ensure quality of EONC services by institutionalizing CQI and improve obstetric and neonatal emergency referrals **Nicaragua**: Increase early detection of complications by enabling providers to complete registration and partogram forms; improve diagnosis and management of essential obstetric and neonatal complications, including gestational and postpartum hemorrhage, puerperal and neonatal sepsis, birth asphyxia, and hyaline membrane disease; support programs' organization and capacity for offering contraceptive methods in public sector and Social Security clinics; and improve management of family planning programs **Russia**: Reduce maternal morbidity and abortion rates through better family planning and modern contraceptive methods **Tanzania**: For pregnant and lactating mothers, increase TB screening in pregnant HIV-positive women, increase ART coverage, and improve well-being in ART patients and thereby their retention; and improve antenatal care, PMTCT, and treatment referrals and linkages, as well as counseling
MDG 6: Combat HIV/AIDS, Malaria and Other Diseases	**Bolivia**: Increase detection of new TB cases and TB cure rates by improving the quality and coverage of TB control activities, including sputum sampling and lab services **Cote d'Ivoire:** Develop standards and indicators for peer education programs addressing HIV prevention and harmonize the courses that train peer educators; improve quality of PMTCT and HIV care and treatment services; and improve health care for vulnerable children

	India: Increase TB case detection and treatment success rates by involving private providers **Indonesia**: Improve diagnosis, management, and referral of TB patients by developing computer-based training for TB **Mozambique**: Improve OVC effectiveness to mitigate the impact of HIV/AIDS on children and families **Namibia**: Increase provider knowledge of HIV/AIDS; improve medical waste management practices; strengthen procurement and logistics; improve health worker knowledge of infection control and occupational safety **OVC Care That Counts (Ethiopia, Kenya, Malawi, Nigeria, Tanzania):** Improve health care for vulnerable children **Russia**: Improve system of detection, referrals, and medical follow up of HIV-positive patients to improve retention and increase enrollment in ART; increase ART enrollment by improving counseling and testing for HIV and integrating these services with other services; support ART scale-up, better adherence, and improved substance abuse treatment and rehabilitation by developing a model system of integrated HIV and drug treatment services; and improve detection, prevention, and treatment of HIV and HIV-TB co-infection **South Africa**: Improve HIV prevention, care, and treatment services; expand linkages between communities and facilities through home-based care organizations; improve PMTCT, counseling and testing, TB/HIV, and ART services **Swaziland**: Provide training to physicians and nurses on pediatric TB/HIV management; provide support for Isoniazid preventive therapy for children under five; increase TB treatment enrollment and strengthen TB DOTS by decentralizing TB services to primary health care clinics; expand linkages between communities and facilities; increase the quality of adult and pediatric HIV/AIDS treatment and ARV services for TB patients by introducing ART in TB clinics; strengthen programmatic and clinical MDR-TB case management; and increase national TB and HIV control program capacity to manage the scale-up of HIV and TB services **Tanzania**: Improve ART coverage, reduce viral loads, and lower likelihood of transmission; standardize quality of care in ART/PMTCT services, train in infant-feeding counseling to reduce mother-to-child transmission; and increase screening for TB in PLWHA and for HIV in TB patients **Uganda**: Improve clinic efficiency and strengthen links to HIV services; and improve HIV care to retain patients, ensure TB assessments, and increase TB treatment completion rates in HIV patients **Vietnam**: Increase access to TB/HIV services by integrating TB and HIV services at district and facility levels; increase referral linkages with ART service providers; and increase TB case detection and treatment success rates by involving private providers

2 Country and Regional Technical Assistance

Africa

2.1 Africa Regional Bureau: "Care That Counts" Initiative to Improve Quality of Programming for Orphans and Vulnerable Children

Overview of HCI's Program in FY09

What we are trying to accomplish	Geographic scale	Population coverage
Build capacity in quality improvement among implementers and stakeholders of programs serving orphans and vulnerable children (OVC)	Worldwide with a focus on sub-Saharan Africa	
Support United States government (USG) implementing partners in applying a standards-based approach to improving the quality of programs serving OVC	Africa-wide with a focus this year on Malawi, Nigeria, Cote d'Ivoire, Tanzania, Mozambique, Kenya, and Swaziland	Estimated number of children orphaned or affected by AIDS: Ethiopia: 650,000 Haiti: Not available Malawi: 560,000 Swaziland: Not available Cote d'Ivoire: 420,000 Kenya: 1.1 million Mozambique: 400,000 Tanzania: 970,000 Nigeria: 1.2 million
Strengthen communication and exchange of best practices in quality improvement (QI) among OVC stakeholders	Worldwide	
Gather evidence on impact of using service standards	FY09 focus, working with Save the Children, was on piloting draft standards and documenting the results in one region of Ethiopia	
Facilitate the development of an African partnership for OVC quality improvement, housed within an African entity	Africa	

Main Activities and Results

Build capacity in quality improvement among OVC implementers and stakeholders

This year HCI developed the "Road Map for Quality Improvement for OVC Programs," a quality improvement guide for OVC stakeholders (program implementers, donors, government officials) that lays out the essential steps toward improving the quality of OVC programs. The Road Map presents four phases: 1) building constituencies and commitment for quality OVC care, 2) defining quality by establishing consensus about service standards, 3) achieving quality improvement at the point of service delivery, and 4) taking stock of lessons learned and best practices. The Road Map was used to frame the

Africa Regional Training and Exchange Event on Improving the Quality of OVC Programs in Adama, Ethiopia, in November 2008. Sixty-four participants from 16 countries (15 in Africa and Haiti) shared and learned best approaches to QI. Fourteen facilitators from several major OVC programming organizations (URC, ChildFund, Save the Children/US, Measure, Family Health International [FHI], Catholic Relief Services, and USAID) facilitated this participatory event. Participants heard from each other on their experiences to date in developing service standards, pilot-testing such standards, and implementing a community-based QI collaborative. Country teams met daily to develop action plans for moving the QI process forward within their countries. The training materials are being revised and will be posted on the ovcsupport.net web site.

Support USG country teams and their implementing partners to define and improve the quality of OVC services

Kenya: The national OVC Quality Improvement Technical Working Group (TWG) was formed immediately after the November 2008 training event. The TWG has since held several meetings to chart the way forward. A draft OVC QI work plan was developed early in 2009 and approved by the OVC steering committee, after which USAID asked HCI to support the national process for Quality Improvement for OVC. In July 2009, HCI and USAID finalized the work plan and timeline of assistance. Work began in August 2009 when HCI presented the work plan at a TWG meeting. The agreement included a desk review on OVC policy and programmatic documents to uncover what they recommend concerning service provision for OVC, different definitions of "vulnerable children" being used by implementing partners, and how national guidelines are applied. In addition, a situation analysis of the services available with different approaches was planned for October 2009.

Malawi: The Ministry of Gender Child and Community Development (MGCCD) has developed several instruments offering a framework for OVC programming. MGCCD is the lead ministry for OVC programs, and through its Department of Social Welfare it coordinates implementation of the National Plan of Action for OVC (2005–2009). However, significant diversity remains in how individual implementers conduct their OVC programs. There is also evidence of duplication of efforts and systematic exclusion of the most vulnerable children and a widespread perception that service quality could be improved. Thus, the USG Mission asked for HCI assistance to the MGCCD to improve quality of services provided by local implementers. As a first step, we conducted, in May, a situational analysis of the current practices of implementers in relation to quality of care. With HCI technical support, the Quality Improvement TWG drafted quality service standards during a workshop in Lilongwe on July 28–30, 2009. Twenty-six participants, representing 15 governmental and non-governmental organizations, contributed to standards in: child protection, early childhood development, education, food and nutrition, household economic strengthening, and psycho-social support.

In addition, HCI provided advice to the TWG to plan for next steps. The first—sharing the draft with other stakeholders who were not at the workshop—was done through the TWG members and champions identified during the workshop. We helped revise the draft standards, incorporating stakeholder views. The final draft has been shared with the TWG and USAID, and discussions are ongoing on the next step, piloting, scheduled to begin in January 2010.

Nigeria: The President's Emergency Plan for AIDS Relief (PEPFAR)/Nigeria invited HCI in August 2009 to 1) help OVC stakeholders recognize the need to focus on the quality of OVC services, 2) facilitate evidence gathering on the current OVC programming situation and share this with key OVC stakeholders, and 3) facilitate a standards development workshop with OVC stakeholders. In addition, the HCI team helped the OVC National TWG identify QI champions who will help advance the QI process, following the QI Road Map described above.

The USG Mission in Nigeria is reviewing its strategic approach to OVC programming and thus decided to use the Road Map as a catalyst to engage all partners in the development of a common vision for

OVC programs. The Ministry of Social Welfare led the workshop and all discussions. The first week of consultations was led by a team that included USAID/South Africa, USAID/Office of HIV/AIDS, OGAC, and HCI. A tremendous buy-in for improvement is apparent: 1) A Ministry focal person has been identified to coordinate QI efforts; 2) draft standards have been developed; and 3) consensus was reached among implementers toward a paradigm shift in thinking about OVC service quality.

Swaziland: Near the end of FY09, the PEPFAR office in Swaziland through the Africa Bureau requested HCI's technical assistance to facilitate a consensus-building workshop on quality standards and to engage all implementers (government, civil society, and donors) in a process to delineate an action plan to complete the draft standards. A field visit to gather information to inform the standards development process will be made in October, ahead of the workshop.

Tanzania: Though HCI did not participate directly in the standards development workshop held early in 2009, HCI provided guidance via phone and email on the documents that led the development of the workshop, including the tools to gather information on actual practices, a review of proposed standards, and a workshop agenda. HCI worked with the Tanzania Quality Improvement TWG and USAID Mission to develop a work plan to follow the development of draft standards. HCI met with the QI Task Force, USAID, and major implementing partners to define QI activities to build capacity of local implementers at the point of service delivery and to strengthen coordination and harmonization among all involved in delivering of services for vulnerable children. During the last quarter, HCI recruited a Quality Improvement Advisor to coordinate and provide technical assistance to USG partners and the TWG.

Haiti: USAID's OVC focal person contacted HCI as Haiti is exploring developing service standards. HCI will provide the materials we developed in French for Cote d'Ivoire to further this effort.

Strengthen communication of best QI practices among OVC stakeholders

South-to-South exchanges: HCI organized two exchanges between QI champions and local nongovernmental organizations (NGOs)/ community-based organizations (CBOs): Ethiopia to Tanzania in January 2009 and Tanzania to Ethiopia in May. Participants reported appreciable learning from each other that would translate into practice to improve programming. Before promoting more of these exchanges, HCI evaluated the model and assessed what is being learned at these visits and implemented from them; a report is in draft.

Quality improvement section of the OVCSupport.net web site: HCI submitted updates to the International HIV/AIDS Alliance for the web site, including new documents, updated country pages, and the addition of new countries: Haiti, Mozambique, South Africa, and Uganda.

Brief the USG Technical Working Group on OVC: HCI participated in several briefings with the USG TWG, of which HCI is a member. In January 2009 with Save the Children and ChildFund, HCI met with the TWG to debrief on the Regional QI Training/Exchange event described above. The debrief shared emerging evidence that applying OVC service standards does make a difference in children's lives and organizational strategies for doing so. HCI also participated in an August 2009 one-day workshop on the role of youth in OVC programming. In collaboration with FHI, HCI led a round table discussion on the importance of youth involvement in defining and improving quality. That same month, HCI presented to the USG TWG some major lessons learned in QI for OVC programs and progress to date. USG is committed to not only continue the work but also to promote lessons learned from Africa to Asia. The TWG asked about the organization of QI teams and their change processes. HCI offered to organize a special debrief with the USG and Save the Children to share the documentation developed from implementing/testing draft standards in Ethiopia.

Quality in Focus calls: HCI hosted five Quality in Focus conference calls for OVC implementers in FY09, discussing: an overview of the Regional Training Event in Ethiopia and participant feedback (December 2008); the Road Map for Improving the Quality of OVC Programs (January 2009); lessons

from the South-to-South exchange visit (March 2009); youth participation in the QI process (May 2009); and how to gather evidence that applying the science of improvement makes a difference in the quality of OVC programs (September 2009).

Gather evidence on the impact of using service standards

In collaboration with Save the Children/US, HCI provided TA over nine months to gather evidence in one region of Ethiopia on how using standards and organizing for improvement makes a difference in quality of services and children's well-being. Working collaboratively, each organization developed a case study to describe the pilot's design, the science of improvement principles, and the results of organizing for improvement. The Ethiopia pilot showed that organizing for QI actually makes a difference in program quality (increased community participation, increased sustainability, greater private/public partnership, all resulting in greater efficiency and intervention effectiveness) and in children's well-being (less time before seeking health services, better understanding of barriers to education, greater protection by developing systems at the community level to address abuse cases). Table 2 has examples of how key improvement principles were applied in the Ethiopian pilot.

Table 2. How the science of improvement was applied to OVC programming in Ethiopia

Science of improvement concept	How applied
Standards	Implementers defined desired OVC program outcomes in Ethiopia and identified the essential actions needed to attain such outcomes in the country's context.
Team approach	Local NGOs and their partners (CBOs and volunteers) formed QI teams to analyze the standards and reflect on their current practices/processes to determine how they could best perform the essential actions as described in the standards.
Client-centered approach	In deciding how to change their current practice, the teams asked themselves, *What impact will [a proposed change] make on the lives of these children?* As teams tested changes, they asked, *What results were achieved that really improved the children's lives?* Children and guardians participated on teams and met regularly to share their opinions about priorities, how organizations were meeting children's needs, and how to address the challenges.
Process orientation	Teams looked at how they were organizing and providing services to children to find ways of changing those processes to make them more effective and more child centered. Exemplary changes include instituting better referral and follow-up mechanisms to improve the coordination of care for children visited by volunteers.
Testing changes	Team members met regularly to plan changes to be tested to improve services.
Shared learning	Learning sessions brought together representatives from all QI teams to share their results and changes and identify innovations and promising practices. Teams returned from these sessions with ideas and materials they could introduce in their own site.
Using data	Simple checklists were developed for use by supervisors of volunteers, local CBOs, and NGOs to identify gaps between the service standards and actual practices. In addition, the Child Status Index was used to measure the well-being of a representative sample of children at the beginning and end of the piloting of standards.

Facilitate the development of an African partnership for quality improvement in OVC programs

Efforts to establish the African Quality Improvement Alliance for Vulnerable Children (AQIAVC) continued this year. Early on, HCI made two visits to the Regional Center for Quality of Health Care (RCQHC) in Kampala to consider the concept of an AQIAVC and explore whether the center was well placed to host it.

To determine whether the RCQHC understands and is comfortable with hosting the AQIAVC, the director (of RCQHC) and another key focal person were invited to the Nigeria standards development

workshop. Both participated actively and expressed interest in adding the OVC portfolio to the RCQHC mandate. HCI proposed an organizational structure for the AQIAVC and a plan to transfer it from HCI to AQIAVC; both are being reviewed by a USAID-led Advisory Committee.

Directions for FY10

HCI will continue to strengthen networks of QI champions across regions and gather evidence on the impact of the science of improvement at the point of delivery of OVC services. The Care That Counts Initiative will also explore applying the science of improvement to other USG-funded initiatives, such as parasocial work training. The four eLearning modules on Quality Improvement for OVC Programs will be completed, and the AQIAVC will be launched with a plan to transfer roles and responsibilities for QI technical assistance from HCI to an African institution. HCI will sponsor an exchange between OVC implementers in Africa and Asia on QI practices.

2.2 Cote d'Ivoire

Overview of HCI's Program in FY09

What we are trying to accomplish	Geographic scale	Population coverage
Improve the quality of HIV care and treatment services in 41 pilot sites in two zones	The 41 sites are located in 27 of the country's 83 districts and 13 of its19 regions The 41 sites include 7 regional hospitals, 15 general hospitals, and 19 medical centers	Sites cover 53% of the country's population of 20.8 million
Improve quality of programs targeting OVC; develop guidelines and norms for OVC programs	Once developed, draft quality standards will be pilot-tested in 4 of the country's 83 districts	Estimated number of children orphaned by HIV: 420,000
Develop standards and indicators for peer education programs in prevention activities and harmonize the courses used for training peer educators	A situational analysis of prevention activities was carried out in 5 of the country's 83 districts.	

Main Activities and Results

Improve the quality of HIV care and treatment services in 41 pilot sites

HCI held a workshop in October 2008 with the Ministry of Health (MOH) and other key partners to present the results of the assessment of the quality of HIV/AIDS care and treatment. HCI, the National AIDS Control Program (PNPEC), and implementing partners CARE and ACONDA had conducted the assessment the previous August. It revealed that quality of care for initial visits for HIV-infected patients not yet eligible for antiretroviral therapy (ART) and ART patients were generally good, but poor patient retention rates and weak documentation throughout the health system posed important barriers to achieving HIV/AIDS program outcomes.

Using these findings, HCI, PNPEC and implementing partners designed an improvement collaborative to improve the quality of HIV care and treatment services and prevention of mother-to-child transmission (PMTCT) in 41 sites. HCI led an orientation workshop in November for the collaborative's technical experts group, during which the change package, objectives, and improvement indicators were determined. In December, the technical committee was trained in managing a collaborative. In addition,

quality improvement (QI) teams were formed at the site level and orientation visits were made to each site to prepare for the first learning session, held in January 2009. Of the 41 sites, 38 provide ART and 34 provide PMTCT services.

Also in January, HCI trained 13 national coaches from the MOH, PNPEC, CARE, ACONDA, and other partners in supporting site-level QI teams. During February and March, a coaching visit was made to the 41 sites, verifying that QI activities had begun at each. The second learning session was held in March. At the third, in August, teams divided into two ART and PMTCT groups to allow for greater participation by team members (e.g., midwives). Changes tested by teams to improve service integration and retention in care of children born to HIV-positive mothers are in Table 3.

Table 3. Cote d'Ivoire: Changes tested by ART and PMTCT teams

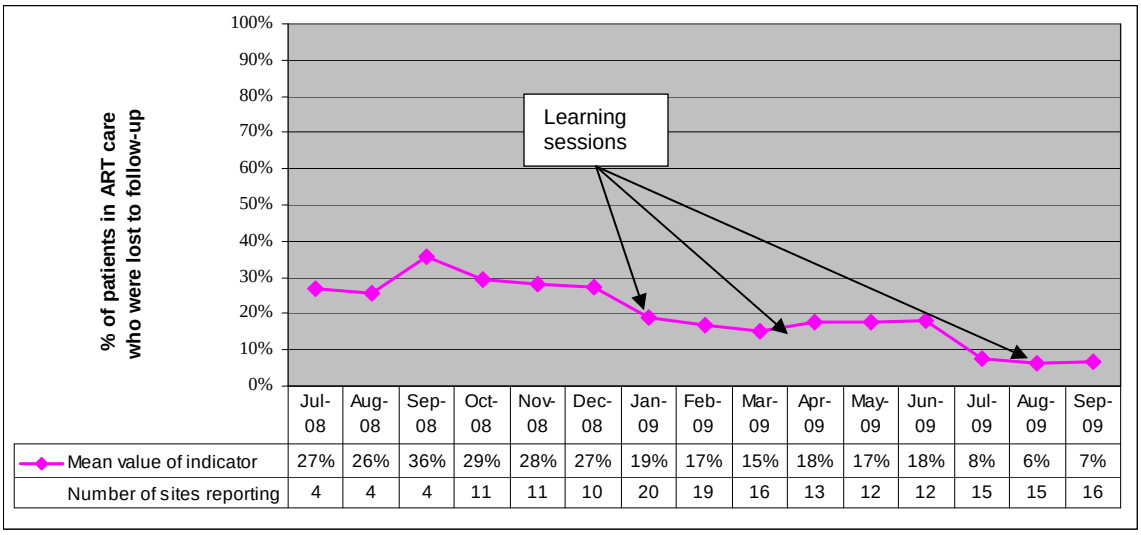
Changes	ART	PMTCT
Increase availability and competence of health workers	Involving the gynecologist in ART	Training and involving guards in patient orientation
Organize care and services	Recording appointments in two lists, one for the facility and one for the patient Designating a staff member responsible for data management Making appointments to provide drugs to patient and CD4 control on the same day	Regular meeting between a gynecologist and staff member of another facility The general hospital, where women deliver and the PMTCT site set up a regular meeting to share lists and information to track HIV-positive women and the children born to them. Tracking children for HIV test in the social center where vaccinations are done
Availability of supplies and equipment	Installing triage room Providing thermometer	New room designated for PMTCT activities

A key collaborative result has been to increase providers' attention to filling out all key items on patient medical records. Completion of key items improved from 13% of ART patient records at baseline to 85% by September 2009, and from 8% to 87% for PMTCT patient records in the same period. Patient retention also improved: Figure 1 shows that ART patient loss to follow-up fell from an average of 28% at baseline (July–December 2008) to 7% by September 2009. The proportion of children born to HIV-positive women who were tested for HIV rose from 15% at baseline to 79% by September (Figure 2).

Improve quality of programs targeting orphans and vulnerable children

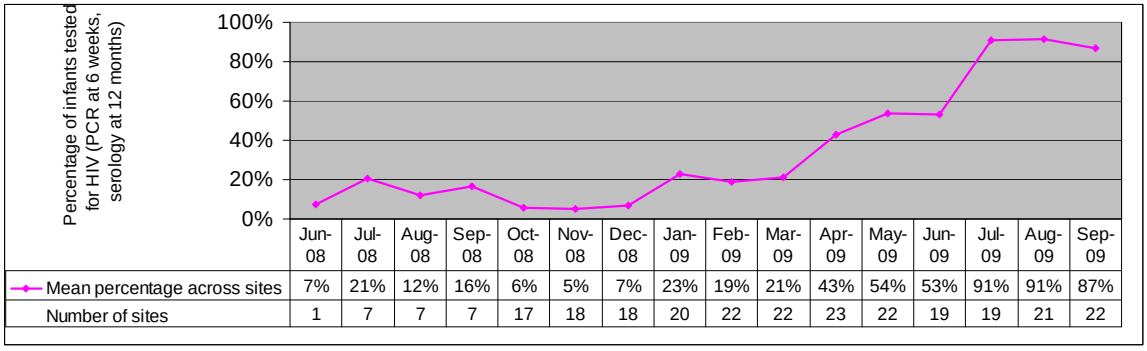
HCI was asked in March 2009 to assist the National Program for the Care of OVC (PNOEV) to develop quality standards for OVC services. At an HCI-led consensus-building workshop, Ms. Marie-Eve Hammink introduced the QI Road Map to PNOEV, the President's Emergency Fund for AIDS Relief/Centers for Disease Control and Prevention (PEPFAR/CDC), UNICEF, and other partners and helped them develop an action plan to develop national guidelines and standards for OVC services. Following up on that workshop, HCI circulated the draft standards and collected inputs from all partners and local OVC champions. HCI led a second workshop in May to revise the standards with champions and partners. A full-time local OVC technical advisor, Ms. Lucie Dagri, joined the HCI team in May. In July, HCI led two client-centered OVC program workshops with PNOEV and implementing partners and finalized the standards. Indicators to measure compliance with the standards and assess the quality of OVC programs were also developed with partners.

Figure 1. Cote d'Ivoire: Patient loss to follow-up during ART in collaborative sites, July 2008–September 2009



	Jul-08	Aug-08	Sep-08	Oct-08	Nov-08	Dec-08	Jan-09	Feb-09	Mar-09	Apr-09	May-09	Jun-09	Jul-09	Aug-09	Sep-09
Mean value of indicator	27%	26%	36%	29%	28%	27%	19%	17%	15%	18%	17%	18%	8%	6%	7%
Number of sites reporting	4	4	4	11	11	10	20	19	16	13	12	12	15	15	16

Figure 2. Cote d'Ivoire: HIV testing for infants born to HIV-positive women in collaborative sites, July 2008–September 2009



	Jun-08	Jul-08	Aug-08	Sep-08	Oct-08	Nov-08	Dec-08	Jan-09	Feb-09	Mar-09	Apr-09	May-09	Jun-09	Jul-09	Aug-09	Sep-09
Mean percentage across sites	7%	21%	12%	16%	6%	5%	7%	23%	19%	21%	43%	54%	53%	91%	91%	87%
Number of sites	1	7	7	7	17	18	18	20	22	22	23	22	19	19	21	22

Develop standards and indicators for peer education programs in prevention activities

In 2009, PEPFAR and USAID asked HCI to expand its program in Cote d'Ivoire to support HIV prevention activities. This work will develop national standards for core competencies of peer HIV counselors and develop—in collaboration with the Ministry of HIV/AIDS (MLS), CDC, PEPFAR, and other prevention partners—the means to measure the processes and outcomes of peer education programs on a nationwide basis. These indicators and tools will be used to supervise staff and improve programs. HCI hired a local QI Advisor for Prevention, Ms. Tana Yapi, in June and established a Prevention QI Technical Working Group to ensure coordination with other PEPFAR-supported efforts. Tools for quality assessment of peer education and outreach were drafted and field tested in June. A situational analysis of prevention efforts was done in August with PEPFAR and MLS to assess activities of seven prime partners and nine implementing partners in five districts.

Directions for FY10

We will scale up the ART/PMTCT collaborative in FY10 to 80 new sites. Best practices and successful changes from the demonstration sites will be collected and disseminated to the spread sites. We will

establish and train a network of regional coaches to support the sites during the spread phase and build regional capacity in quality improvement. Draft OVC quality standards will be piloted in four districts. Quality standards for peer education on prevention will be developed with MLS and implementing partners. We will also participate in laboratory accreditation activities sponsored by the WHO Africa Regional Office.

2.3 Lesotho

Overview of HCI's Program in FY09

What we are trying to accomplish	Geographic scale	Population coverage
Reduce TB/HIV-related morbidity and mortality among HIV and TB patients by: ▪ Strengthening collaboration between TB and HIV programs ▪ Decreasing the TB burden among people living with HIV/AIDS (PLWHA) ▪ Decreasing the HIV/AIDS burden among TB patients	All 10 districts in the country: ▪ 16 of the 17 TB diagnostic centers (hospitals) in the country ▪ 16 of the 18 health service areas in the country	Estimated at 1.5 million

Main Activities and Results

Provide technical assistance and policy-level support to the National Tuberculosis Program and STI and HIV/AIDS Directorate

HCI participated in finalizing the laboratory strategic plan of the Ministry of Health and Social Welfare (MOHSW) and attended TB/HIV TWG meetings that adopted the national TB/HIV strategic plan. HCI helped the MOHSW complete the final draft of the National Tuberculosis Policy Manual and guidelines on multidrug-resistant (MDR) TB case management. We also helped prepare a first draft of PMTCT guidelines on TB management for pregnant mothers. We assisted partners in finalizing and printing MDR/XDR [extensively drug-resistant] TB registers, TB suspect registers, and patient treatment cards.

HCI also assisted the National TB Program (NTP) in conducting a drug resistance survey. Recruitment of study subjects ended March 31, 2009, and 2,320 sputum samples were collected and sent for culture. Drug susceptibility testing (DST) is expected to be completed by the end of October 2009, with a preliminary report in January 2010.

Strengthen TB-HIV coordination through training and ongoing mentoring of health care workers

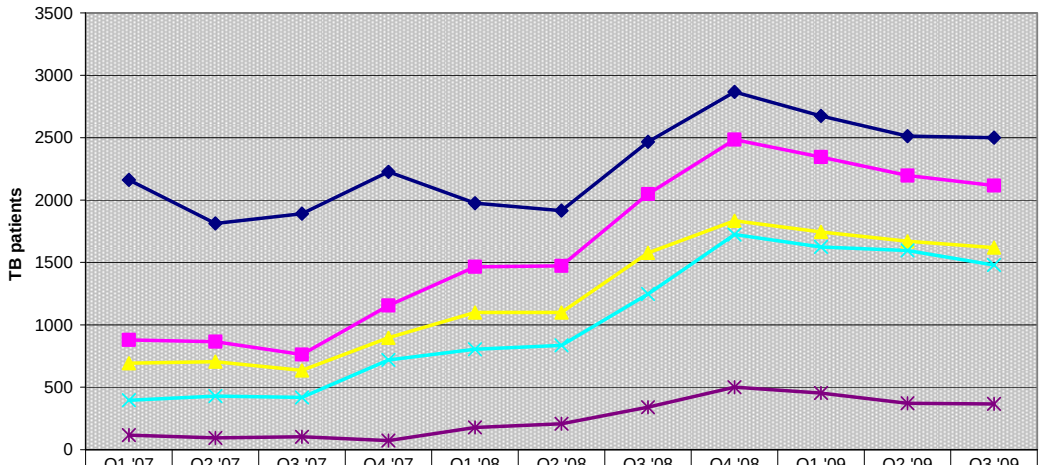
HCI worked with staff in TB care settings to improve HIV counseling and testing uptake among TB suspects and patients. HCI trained and mentored health care workers and lay counselors in 24 health care facilities in providing high quality services to TB and HIV patients, ensuring that these patients received comprehensive services. HIV-infected TB patients were given Cotrimoxazole preventive therapy (CPT) and referred for HIV care, treatment, and support. Prevention of HIV infection was also being strengthened through health education and condom promotion among TB suspects and patients. HIV-infected TB suspects found not to have TB were referred to the ART clinic for support, care, and treatment.

An October 2008–September 2009 review of TB registers in HCI-supported health facilities showed:

- 10,554 TB patients were registered,
- 9143 (87%) had their HIV status recorded,
- 6897 (75%) were HIV-positive,
- 6423 (93%) of those who were HIV-positive were on CPT, and
- 1693 (25%) of those who were HIV-positive were on ART

Figure 3 shows the progress from January 2007 to September 2009 in the provision of HIV testing and counseling, CPT, and ART to HIV-infected TB patients.

Figure 3. Lesotho: HIV testing and follow-up treatment for TB patients seen at TB diagnostic centers, January 2007–September 2009



	Q1 '07	Q2 '07	Q3 '07	Q4 '07	Q1 '08	Q2 '08	Q3 '08	Q4 '08	Q1 '09	Q2 '09	Q3 '09
# of registered TB pts	2162	1813	1892	2227	1975	1915	2467	2866	2675	2512	2501
# of TB pts tested for HIV	879	865	762	1155	1465	1472	2048	2485	2345	2196	2117
# of TB pts HIV-positive	692	705	635	897	1099	1100	1578	1834	1744	1669	1620
# of HIV+ TB pts on CPT	396	429	418	719	804	835	1247	1723	1625	1596	1479
# of HIV+ TB pts on ART	117	95	103	73	178	207	340	500	454	372	367
# of diagnostic centers	4	10	10	12	12	12	12	17	18	18	15

Time (Quarter/Year)

HCI supported the training of health doctors, nurses, nurse assistants, professional counselors, community health workers, and health professionals in the uniformed forces in TB, TB/HIV, and TB infection control, reaching 639 health workers, including 491 community/village health workers, 109 lay counselors, and 41 traditional healers. Ten District TB Coordinators were trained on TB program management at the district level using the new WHO TB manuals, and 70 members of the uniformed forces (police and prisons) were trained on TB infection control in congregate settings.

HCI also conducted refresher trainings to ensure accurate recording and reporting of TB-HIV data at the facility level, training 10 TB coordinators and 18 TB officers on the use of the WHO Electronic TB Register.

The HCI team conducted regular support visits to the facilities in all the 10 districts. On-the-job training and mentoring focused on the counselors, TB officers, district TB/HIV coordinators and clinicians.

These efforts covered diagnosis and treatment, HIV testing and counseling for TB suspects and patients, and recording and reporting TB/HIV data. HCI staff visited each facility at least monthly.

HCI also provided technical support to two private facilities, Jessy Polyclinic in Leribe District and Carewell in Maseru. Both had HCI-supported lay counselors who were involved in HIV testing and counseling for TB suspects and patients. HCI technical staff visited these clinics at least monthly, providing training in recording and reporting TB-HIV data to the MOHSW.

Provide laboratory support for diagnosis and management of TB-HIV patients

HCI provided support for a laboratory technician and 10 microscopists in the Central Laboratory for the first quarter of FY09. These staff perform in sputum smear examinations for TB diagnosis and treatment follow-up. Their placement improved countrywide access to microscopy.

Support advocacy, communication, and social mobilization to promote awareness of TB-HIV co-infection and treatment

A few examples of communication campaigns HCI supported during FY09 are:

- World AIDS Day: Messages for the public on TB-HIV were placed in two weekly newspapers and emphasized screening for TB among PLWHA. HCI participated and displayed educational material on TB/HIV in Qacha's Nek. About 40,000 pamphlets on TB-HIV were printed and distributed.
- World TB Day: Messages for the public on TB-HIV were placed in two weekly newspapers. A message on TB symptoms and screening was distributed countrywide to subscribers of a mobile telephone service. The message read: "If you have a cough for two weeks or more, you may have TB. Visit your nearest health centre for TB screening. We all can Stop TB. MOHSW/PEPFAR." Ten thousand pamphlets on TB were printed, and 650 T-shirts, 500 caps, and 20 banners with the messages, "I Am Stopping TB" and "World TB Day 2009" were procured for the MOHSW.
- TB/HIV Community Mobilization in Roma Health Service Area: Case-finding and health education sessions were carried out in four hard-to-reach villages. All in attendance were encouraged to test for HIV if they had not done so in the last three months; those who had had a cough for more than two weeks were encouraged to submit sputum for lab examination. Rapid HIV test kits were used.

Directions for FY10

HCI activities in Lesotho ceased in September 2009: The Mission is channelling all QI funding into its new bilateral project.

2.4 Mozambique

Overview of HCI's Program in FY09

What we are trying to accomplish	Geographic scale	Population coverage
Build the capacity of the Ministry of Women and Social Action (MMAS) and a QI task force in quality improvement for OVC programs	National scale first and foremost with the MMAS and also with more than 18 USG-funded partners and their local partners	Estimated number of children orphaned by AIDS: 400,000 Estimated number of vulnerable children served by PEPFAR-funded programs: 242,800
Draft outcome-based service standards to define quality and communicate them across all types and levels (central, provincial, and district) of stakeholder.	Work with implementing partners and provincial authorities in one region to implement and gather evidence on the standards	

Main Activities and Results

Prepare the ground work for standards development with key stakeholders

In late 2008, PEPFAR/Mozambique requested HCI's technical support in building the capacity of the MMAS in its standards development process. During December 2008, HCI met with the OVC TWG, led by the Ministry, and other stakeholders (USAID, UNICEF) to prepare the ground for standards development for vulnerable children programs. HCI and stakeholders conducted a rapid situational analysis of some of the existing OVC programs in three regions (Maputo, Zambezia, and Gaza). The TA team (USAID and HCI) identified several quality issues at visited programs: vulnerable children who have not been tested despite living with HIV-infected parents; an international NGO-built shelter that does not meet community norms; guardians who are visited but not counseled on ART adherence; young girls receiving limited counseling on reproductive health; USAID programs in a single district with diverging strategies, such as focusing on commodity delivery versus community mobilization/ participation; limited assessment of children's needs and understanding of prioritization of who needs what; and limited linkages with public services. The HCI TA team organized two presentations on the rationale for standards development and other countries' experiences. After the presentation and a review of a draft work plan, the TWG committed itself to support QI for OVC programs.

Conducting workshops for youth input to standards development

During June–September 2009, HCI collaborated with MMAS to organize and lead three youth workshops (in Beira, Xai Xai, and Nacala) to add children's voices to the standards development process. Youth 10–14 years old attended, with equal gender participation. HCI shared concept papers with MMAS and the TWG to build commitment to include children and youth in the QI process and move toward institutionalization. HCI also trained a group of young facilitators (youth aged 14–20 years who had been identified by MMAS and implementing partner Save the Children) to lead the workshops. This method helped build confidence in children's ability to offer valid opinions and perspectives.

Box 1. Mozambique: Youth views expressed at the workshops and presentation to national authorities

We need the opportunity to study…to be loved, to have freedom, to be healthy, to be respected, to help.

- Youth participant in Xai Xai Region

Quality of programs…means that we can study so that we can help when we grow up…I want to be a nurse to help other children like me who come to the clinic.

- Youth participant in Nacala Region

Many of you sit at your desk…behind your computers…in your office...You make decisions on our behalf… without understanding who we are.

- Youth presenter at national conference

Development of draft standards

HCI provided TA and led a standards development workshop in Maputo in June–July. We invited government representatives at the workshop to make a commitment to institutionalize the QI process, and they drafted a document to guide service delivery organizations.

In June 2009, HCI hired a QI Coordinator, Ms. Helena Guiliche, to liaise with the OVC Task Force and keep QI momentum alive within the MMAS. She has engaged with the MMAS and USAID and is providing support to the QI Task Force. Knowing that most NGOs, CBOs, and other OVC programming organizations did not attend the first workshop and wanting to engage them, she organized a second three-day workshop for these partners in Beira in September. This workshop refined the earlier standards, so the QI Task Force has taken leadership in reconciling the first and second set of standards. A third workshop will be organized for implementing partners in the northern region (Nampula, Zambézia, Cabo Delgado, and Niassa) to ensure their participation.

Directions for FY10

HCI will organize regional meetings with implementing partners in regions that did not participate in the workshops. Following on this wider consultative process, HCI will work with the National OVC Task Force to assess all the ideas put forward for the standards and come to a harmonized, single set of standards. These will be piloted in three regions; pilot results will inform the final standards.

2.5 Namibia

Overview of HCI's Program in FY09

What we are trying to accomplish	Geographic scale	Population coverage
Improve health care provider knowledge about HIV/AIDS	12 of the country's 13 regions	1371 health care providers
Conduct qualitative research on the acceptability of male circumcision	8 of the country's 13 regions	

Main Activities and Results

Conduct qualitative research on male circumcision

HCI submitted to USAID and the Male Circumcision Task Force in January 2009 a draft report on research conducted in August 2008 on male circumcision in different regions of Namibia. Presenting the views of the public and health care providers, the report discusses perceived benefits and disadvantages of circumcision, key influences affecting how decisions about circumcision are made, and levels of awareness about how circumcision can prevent the spread of HIV. It provides recommendations to incorporate male circumcision into the national HIV/AIDS response. After revisions to address country-level feedback, a final draft was submitted to USAID in July 2009; the report awaits Ministry of Health and Social Services (MOHSS) approval.

Improve health care provider knowledge of HIV/AIDS

HCI's supported the MOHSS workplace program to improve health care provider knowledge of HIV/AIDS. This program addresses the negative effect that stigma and discrimination can have on the interaction of health care workers and HIV-infected patients or those perceived to be HIV-positive. The program sought to change health care workers' behavior to ensure that people seeking help for HIV-related illness receive high quality care and to raise awareness among health workers of their personal protection against HIV transmission. These objectives were achieved by exposing health care workers to information about abstinence, being faithful, and condoms; de-stigmatization; stress management; bereavement support; and reporting needle stick injuries. HCI helped reinforce the HIV/AIDS information at facilities by mentorship and supportive supervision visits. By the end of the FY09, the program had directly trained 246 health care providers in 12 regions and trained 11 district staff to serve as focal persons in their workplaces. Another 1,371 health care workers received information through peers and leaflets.

Directions for FY10

HCI support will now focus on developing leadership to champion infection prevention and control activities at all levels, advocating for the MOHSS to assume responsibility of procurement of sharps containers, training district trainers for medical injection safety and infection prevention and control, integrating infection control training in pre- and in-service national trainings, and integrating related indicators into the national health reporting system.

2.6 South Africa

Overview of HCI's Program in FY09

What we are trying to accomplish	Geographic scale	Population coverage
Increase quality of HIV prevention, care, and treatment services	5 of the country's 9 provinces: 214 facilities (9% of all primary health care facilities in the 5 provinces)	2 million population served by these facilities 550,000 HIV patients
Expand linkages between communities and facilities by working with home-based care (HBC) organizations	6 HBC organizations in 4 provinces and serving 15 facilities	15,000 HIV patients who receive HBC

Main Activities and Results

FY09 witnessed rapid expansion in the HCI South Africa program, increasing the number of health facilities supported from 140 to 214. A consequent expansion in staff has contributed to key progress in all HCI-supported programs:

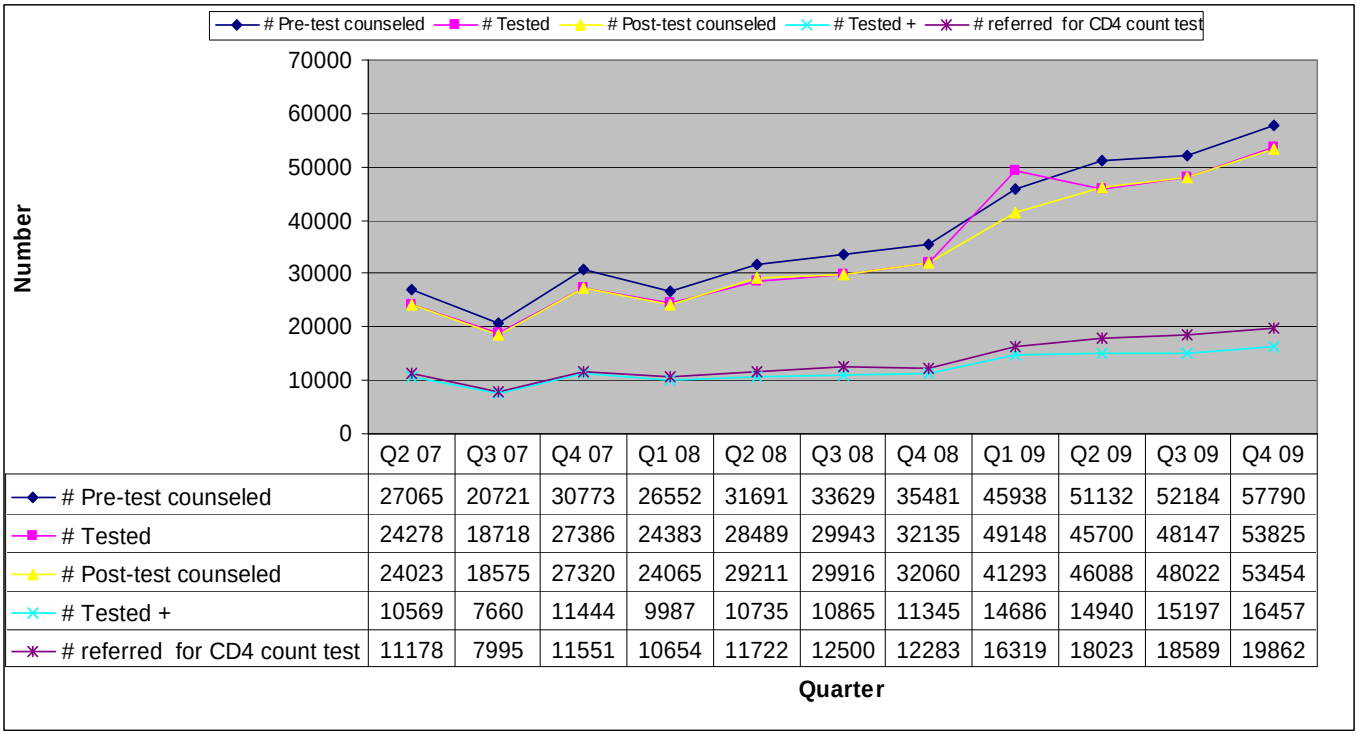
Access to and the quality of PMTCT programs has improved, providing care to 56,119 pregnant women this fiscal year. HCI has also helped improve counseling and testing (C&T) services in facilities in all provinces, where service delivery to 188,751 clients has shown considerable improvement, exceeding the target set for this period. Additionally, HCI has been developing systems to improve the continuum of care for persons living with HIV through cross-referral practices, and case management practices have improved at the community and facility levels. Improvements in the provision of basic health care included facility-based TB services, with care provided to 46,159 HIV-infected individuals. In addition, improvements in the provision of ART reached 19,944 HIV-infected individuals. By developing relationships and involving ART-accredited facilities with community- and home-based organizations, HCI has exerted considerable effort to improve the follow-up of HIV-infected patients on ART, thereby improving the continuum of care. At the same time, HCI has been providing TA at the facility level to improve health care provider compliance and patient adherence with treatment regimens. HCI has continued to provide QI training for PEPFAR organization staffs, as requested by USAID South Africa: This training will build capacity and enable organizations to develop sustainable interventions.

HCI staff also participated in several cross-cutting initiatives, including:

- Developing an implementation plan for a clinic supervision manual in collaboration with the National Department of Health (NDOH);
- Participating in "quality month" activities in November, showcasing best practices, sharing lessons learned, and stimulating team-building activities at the district level;
- Participating in AIDS Day (December 1) activities in each supported district;
- Integrating QI and the accelerated PMTCT plan;
- Participating in the implementation of Community Integrated Management of Childhood Illness (IMCI) and antenatal care (ANC) care as part of a plan for 18 priority districts to improve maternal and child health;
- Participating in the development of revised national care standards for health facilities;
- Participating in the development of national clinical audit guidelines; and
- Assessing, in collaboration with NDOH, of the impact of QI initiatives in South Africa over the last 15 years

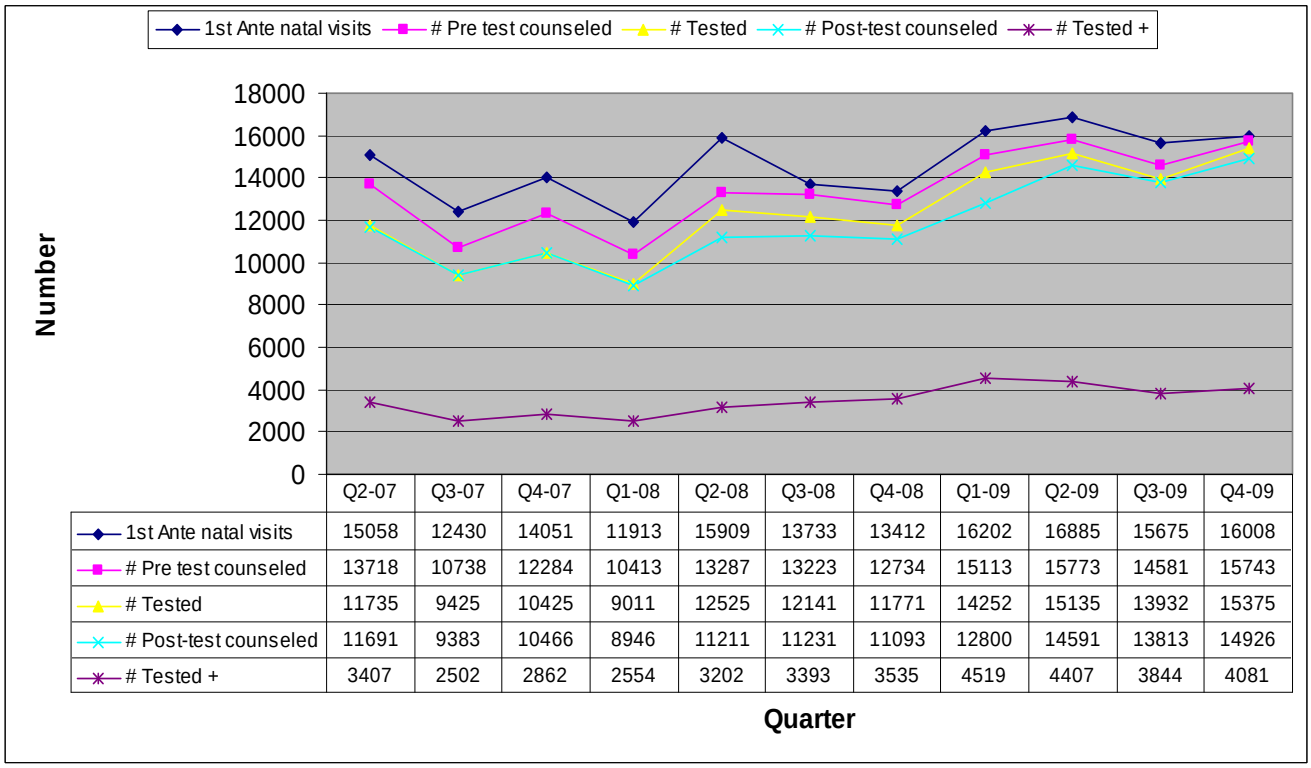
Figures 4 through 9 present results from HIV/AIDS improvement activities in South Africa during FY09.

Figure 4. South Africa: Number of clients tested and counseled for HIV, 2007–2009



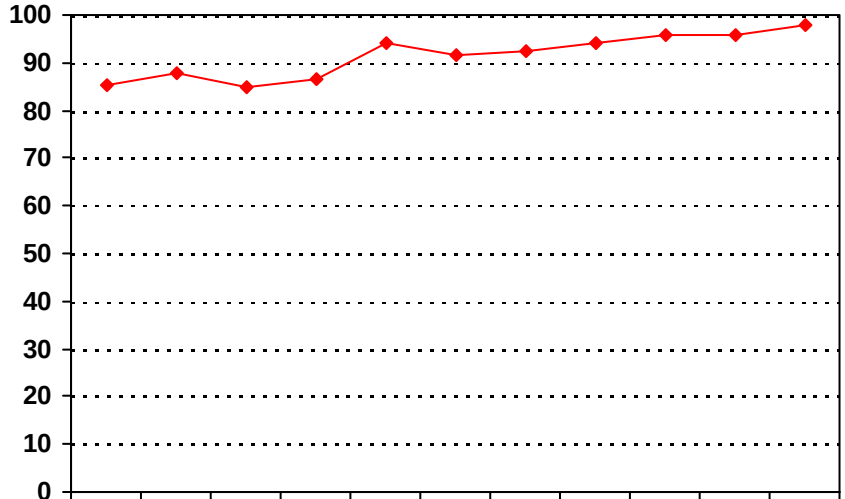
	Q2 07	Q3 07	Q4 07	Q1 08	Q2 08	Q3 08	Q4 08	Q1 09	Q2 09	Q3 09	Q4 09
# Pre-test counseled	27065	20721	30773	26552	31691	33629	35481	45938	51132	52184	57790
# Tested	24278	18718	27386	24383	28489	29943	32135	49148	45700	48147	53825
# Post-test counseled	24023	18575	27320	24065	29211	29916	32060	41293	46088	48022	53454
# Tested +	10569	7660	11444	9987	10735	10865	11345	14686	14940	15197	16457
# referred for CD4 count test	11178	7995	11551	10654	11722	12500	12283	16319	18023	18589	19862

Figure 5: South Africa: Number of first antenatal clients tested and counseled for HIV, 2007–2009



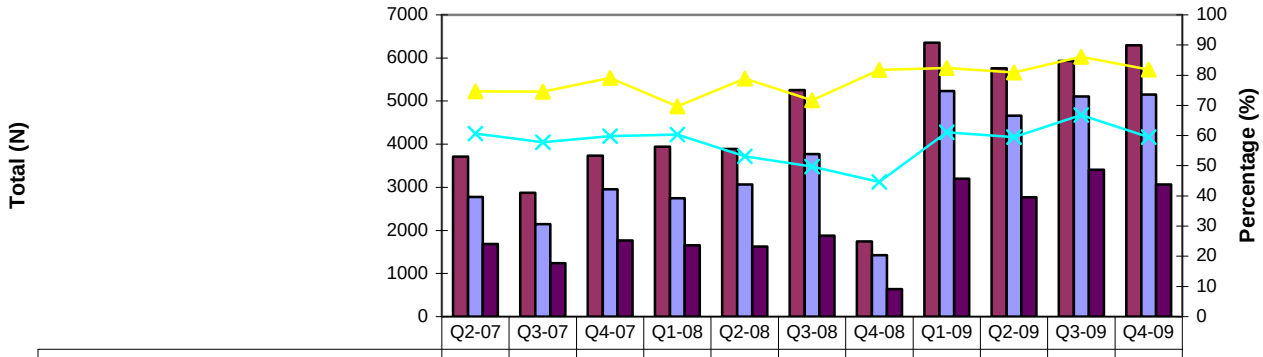
	Q2-07	Q3-07	Q4-07	Q1-08	Q2-08	Q3-08	Q4-08	Q1-09	Q2-09	Q3-09	Q4-09
1st Ante natal visits	15058	12430	14051	11913	15909	13733	13412	16202	16885	15675	16008
# Pre test counseled	13718	10738	12284	10413	13287	13223	12734	15113	15773	14581	15743
# Tested	11735	9425	10425	9011	12525	12141	11771	14252	15135	13932	15375
# Post-test counseled	11691	9383	10466	8946	11211	11231	11093	12800	14591	13813	14926
# Tested +	3407	2502	2862	2554	3202	3393	3535	4519	4407	3844	4081

Figure 6. South Africa: Proportion of first antenatal clients tested for HIV, 2007–2009



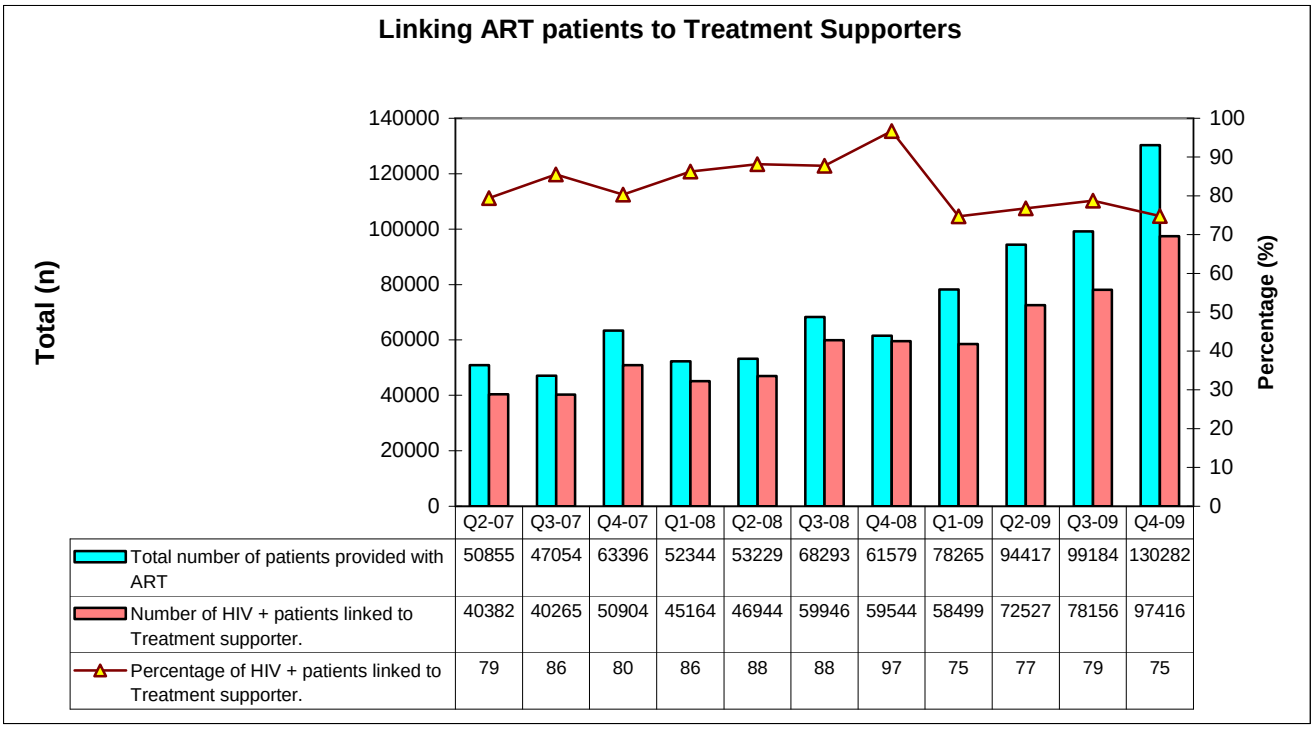
	Q2-07	Q3-07	Q4-07	Q1-08	Q2-08	Q3-08	Q4-08	Q1-09	Q2-09	Q3-09	Q4-09
% First ante natals tested	85.5	87.8	84.8	86.5	94.3	91.8	92.4	94.3	95.9	95.6	97.7

Figure 7. South Africa: Basic health care and support and TB/HIV: Testing TB patients for HIV, 2007–2009



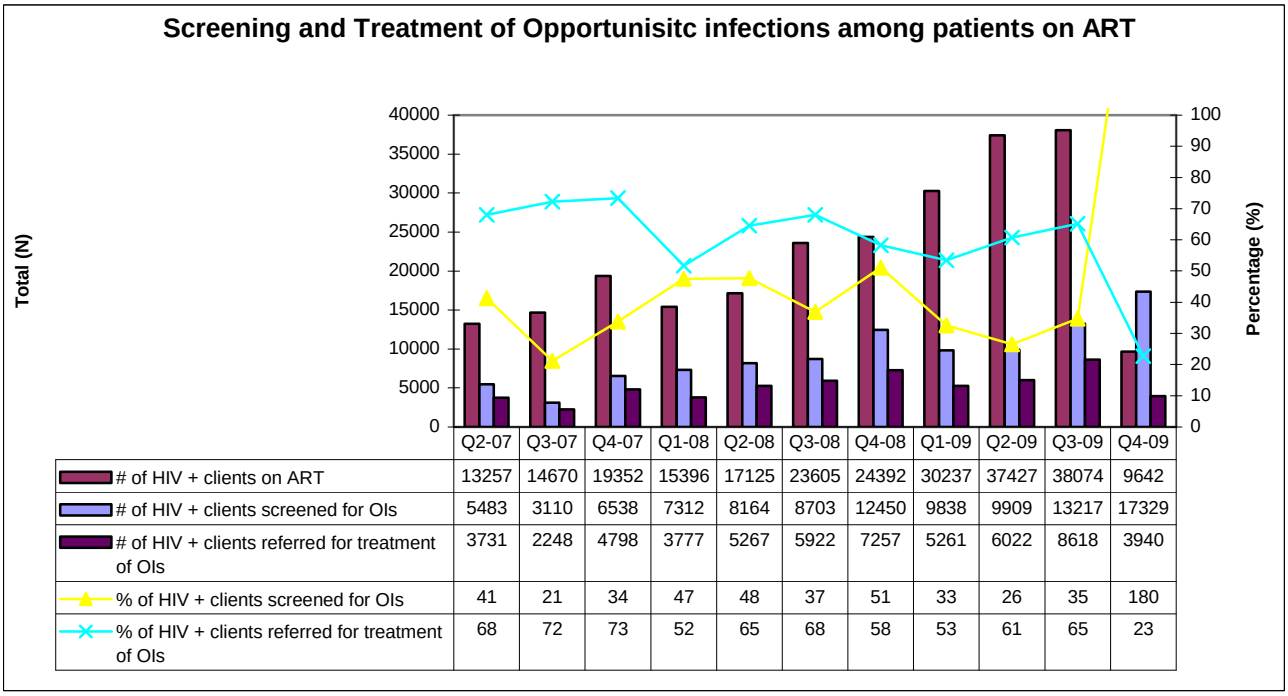
	Q2-07	Q3-07	Q4-07	Q1-08	Q2-08	Q3-08	Q4-08	Q1-09	Q2-09	Q3-09	Q4-09
Number of TB patients referred for HIV C&T	3715	2874	3733	3940	3887	5258	1743	6352	5759	5933	6293
Number of TB patients tested for HIV	2775	2144	2954	2744	3068	3772	1426	5236	4660	5106	5155
Number of TB patients tested HIV positive	1682	1239	1767	1655	1629	1878	636	3198	2771	3410	3065
Percentage of TB patients tested for HIV	75	75	79	70	79	72	82	82	81	86	82
Percentage of TB patients tested HIV +	61	58	60	60	53	50	45	61	59	67	59

Figure 8. South Africa: Comprehensive care and ART services, 2007-2009



	Q2-07	Q3-07	Q4-07	Q1-08	Q2-08	Q3-08	Q4-08	Q1-09	Q2-09	Q3-09	Q4-09
Total number of patients provided with ART	50855	47054	63396	52344	53229	68293	61579	78265	94417	99184	130282
Number of HIV + patients linked to Treatment supporter.	40382	40265	50904	45164	46944	59946	59544	58499	72527	78156	97416
Percentage of HIV + patients linked to Treatment supporter.	79	86	80	86	88	88	97	75	77	79	75

Figure 9: South Africa: Screening and treating opportunistic infections among ART patients, 2007–2009



	Q2-07	Q3-07	Q4-07	Q1-08	Q2-08	Q3-08	Q4-08	Q1-09	Q2-09	Q3-09	Q4-09
# of HIV + clients on ART	13257	14670	19352	15396	17125	23605	24392	30237	37427	38074	9642
# of HIV + clients screened for OIs	5483	3110	6538	7312	8164	8703	12450	9838	9909	13217	17329
# of HIV + clients referred for treatment of OIs	3731	2248	4798	3777	5267	5922	7257	5261	6022	8618	3940
% of HIV + clients screened for OIs	41	21	34	47	48	37	51	33	26	35	180
% of HIV + clients referred for treatment of OIs	68	72	73	52	65	68	58	53	61	65	23

Directions for FY10

HCI will expand support to three additional home-based care organizations to improve community-level support for persons living with HIV and to identify people needing HIV testing and other support. All HCI data collection tools will be reviewed and revised as needed to conform to the revised PEPFAR indicators. We will also work with NDOH to develop national clinical audit guidelines. Beginning in early 2010, all HCI assistance to South Africa will shift to Task Order 3.

2.7 Swaziland

Overview of HCI's Program in FY09

What we are trying to accomplish	Geographic scale	Population coverage
Strengthen TB DOTS by expanding 1) decentralization of TB services to primary health care (PHC) clinics and 2) linkages between communities and facilities	In all 4 regions (100%) of the country at 7 (100%) hospitals, 11(100%) health centers, and 79 out of 162 (49%) clinics. These last include 5 clinics under the public-private mix strategy (PPM): Medisun, Mbabane, and Manzini clinics, Sigombeni, Mahwalala, and Salvation Army	13,000 estimated TB patients out of 1.03 million
Increase quality of TB/HIV services by increasing integration of TB and HIV services at the regional and facility levels	In all 4 regions (100%) of the country at 7 (100%) hospitals, 11(100%) health centers, and 79 out of 162 (49%) clinics. These last include 6 clinics under the PPM: Medisun, Mbabane, and Manzini clinics, Sigombeni, Mahwalala, and Salvation Army	Estimates suggest that countrywide 8,000 TB patients are co-infected with HIV: 80% of TB patients and 4% of HIV-infected patients.
Increase the quality of adult and pediatric HIV and AIDS treatment/ARV services for TB patients by increasing referral linkages and introducing ART in TB clinics	- Support 3 out of 7 (43%) hospitals in providing ART care and treatment in the TB clinic and 4 (57%) hospital TB clinics that refer to ART clinics - Support 3 out of 11 (27%) health centers that provide ART care and treatment at the TB clinic and 8 (73%) that refer to the ART clinic - Support 10 out 162 (6%) PHC clinics that provide ART care and treatment	4000 TB-HIV co-infected patients need ART, out of 60,000 persons with HIV countrywide who need ART(national ART estimate)
Improve MDR-TB case management at TB hospital and other facilities	- Provide technical support at the national level and in all 4 regions (100%) at 7 (100%) hospitals and 11 (100%) health centers - Support 12 out of 162 (7%) hospitals/ clinics for MDR-TB patient follow-up care	Estimated 1,000 MDR-TB suspects Estimated 200 MDR-TB patients per year

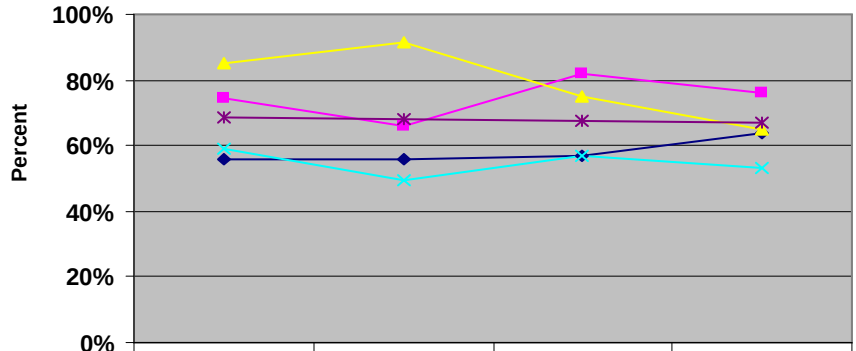
Main Activities and Results

Decentralize TB services

The HCI Project continued to work with a number of TB diagnostic sites and communities to increase TB treatment enrollment and follow up. Decentralization of TB initiation to seven PHC clinics—Thabankhulu, Mahwalala, Sigombeni, Wellness centre, Mashobeni, JCI, and Kamfishane—was achieved.

The national average achieved was 68%, a case detection rate among pulmonary smear-positive cases, up from 58.5% in FY08. The WHO-recommended target for case detection among smear positive cases is 70%. Figure 10 shows the national and regional FY09 quarterly detection rates of the 20 HCI-supported diagnostic sites.

Figure 10. Swaziland: Case detection rate for sputum smear-positive TB cases, FY09

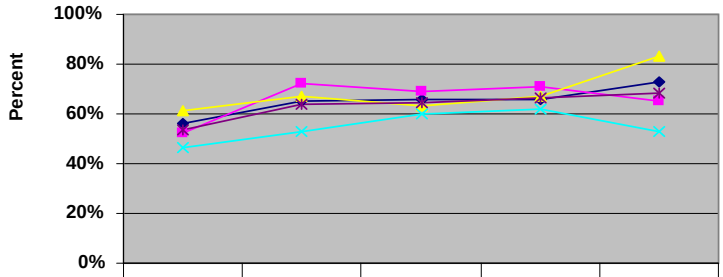


	Oct-Dec 08	Jan-Mar 09	Apr-Jun 09	Jul-Sept 09
Hhohho	56%	56%	57%	64%
Shiselweni	75%	66%	82%	76%
Manzini	85%	91%	75%	65%
Lubombo	59%	49%	57%	53%
National average	69%	68%	68%	67%

Year Quarter

At the 20 HCI-supported diagnostic sites, we achieved increased treatment success among the pulmonary smear-positive TB cases in FY09, which rose to a national annual average of 67% in FY09, up from 54% in FY08. Figure 11 shows treatment success rates for each region and the national average by quarter in FY09 compared to the fourth quarter of FY08.

Figure 11. Swaziland: Treatment success rates among smear-positive TB cases in 20 TB diagnostic facilities, 4th quarter FY08 and FY09



	Jul-Sept 08	Oct-Dec 08	Jan-Mar 09	Apr-Jun 09	Jul-Sept 09
Hhohho	56%	65%	66%	66%	73%
Shiselweni	52%	72%	69%	71%	65%
Manzini	61%	67%	63%	67%	83%
Lubombo	46%	53%	60%	62%	53%
National average	54%	64%	65%	67%	69%

Year Quarter

Increasing access to quality TB-HIV services, including ART for eligible co-infected patients

HCI supported 20 TB diagnostic units and 79 PHC clinics in FY09 to provide TB- and HIV-related care; we also provided training to 571 health care workers. Through HCI technical support, 7,043 PLWHA received TB- and HIV-related services; 6,471 HIV-infected individuals received Cotrimoxazole; 2,215 TB/HIV co-infected patients received CD4 tests; 399 TB-HIV co-infected individuals were initiated on ARV therapy; and 1,369 individuals continued ARV therapy while on TB chemotherapy. In the context of implementing the three "I's" (Intensified TB case finding, Isoniazid preventive therapy, Infection control), HCI validated the TB screening tool among PLWH attending HIV care, started piloting Isoniazid Preventive therapy at 12 clinics with a cohort of 300 patients for feasibility and safety, and conducted trainings on the three I's.

The screening tool was pilot tested in three HIV care sites: two for adults and one for children (0–12 years). The tool has been adopted by the Ministry of Health and Social Welfare (MOHSW) for use as the national TB screening tool at clinical and community settings. The validation exercise helped us develop adjustments in patient flow, and in busy centers staff were added to supervise sputum collection ("cough assistants"), strengthen referral systems between HIV and TB services, and advocate for active case finding and strengthening infection control in congregate settings.

HCI provided training for the scale-up of intensified TB case finding in eight ART units and three public health units providing PMTCT services. HCI provided TA for the establishment of linkages and referrals for care and treatment of co-infected patients and for scaling up implementation of provider-initiated HIV testing and counseling for TB patients and suspects in TB clinical settings.

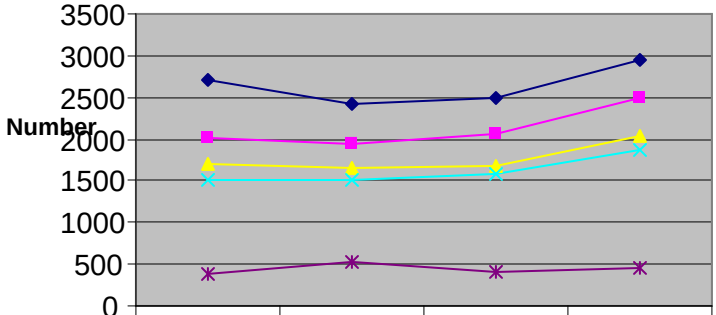
We provided technical assistance to the National TB Control Programme (NTCP) and the Swaziland National AIDS Programme (SNAP) for integrated TB and HIV care through coordinated activities to strengthen collaborative mechanisms at the national level by facilitating 1) quarterly meetings of the TB/HIV national coordinating committee, 2) joint planning meetings for collaborative activities, 3) joint trainings of health care workers, 4) joint resource mobilization (especially Global Fund round 8 applications), and 5) joint clinical support supervision. At the regional level, our staff worked closely with the NTCP regional coordinators to mentor facility-based health care workers in technical skills, improve recording of the new indicators, and strengthen feedback to facility management on the performance of the TB/HIV activities.

HCI supported five TB diagnostic sites to begin providing antiretroviral therapy in order to extend quality adult and pediatric HIV care and treatment to TB clinics. In FY09, 2,215 TB/HIV co-infected patients had CD4 testing to assess for the need of ART, and 399 TB-HIV co-infected patients were initiated on ART. Figure 12 shows uptake of HIV testing before or during TB treatment, Cotrimoxazole prophylaxis, and ART in TB diagnostic units.

Improve MDR TB diagnosis and case management

HCI helped the NTCP to launch its MDR-TB program, develop and print MDR-TB clinical and programmatic guidelines for case-finding, MDR-TB recording and reporting, and clinical management of drug-resistant TB. We conducted a rapid survey with the National Reference Laboratory (NRL) to identify all diagnosed MDR-TB patients and instituted a tracking mechanism to find out where all previously diagnosed patients were and whether they had initiated treatment. We are working with the national TB hospital in Manzini to ensure that everyone diagnosed with MDR-TB is enrolled in care. The results of the rapid survey spurred the MOHSW to complete an MDR-TB isolation facility at the national TB hospital. HCI assisted the hospital to finalize standard operating procedures for departments within the hospital. HCI also provided TA on quantifying needs for second line anti-TB drugs quantification and supply chain management and trained 64 health care workers on the management of MDR-TB.

Figure 12. Swaziland: Uptake of HIV testing, CPT and ART among TB patients attending 20 TB diagnostic centers, FY09



	Oct 08 -Dec 08	Jan 09-Mar 09	Apr 09-Jun 09	Jul 09-Sep 09
# TB patients	2706	2422	2497	2949
# Tested for HIV	2004	1935	2070	2502
# HIV positive	1714	1649	1678	2026
# On CPT	1508	1515	1582	1866
# On ART	382	520	402	464

Year quarter

HCI worked with the NRL to validate reported cases of MDR-TB, including verification of results of MDR-TB patients diagnosed by culture and drug sensitivity testing. HCI systematically analyzed the most common resistance patterns for MDR-TB patients; patterns showed that resistance to four of the first-line drugs (Streptomycin, Isoniazid, Rifampicin and Ethambutol) was high. HCI continues to provide technical assistance to the MDR-TB hospital through the HCI Drug Resistance Coordinator. HCI continues to provide support to the NTCP at the program and facility levels to improve clinical management of drug-resistant TB.

Directions for FY10

HCI will continue to provide leadership and TA in strengthening TB, TB/HIV, and MDR-TB service delivery by scaling up decentralized service delivery, TB/HIV integration, and capacity development at all levels. New initiatives include home initiation of TB treatment, active TB case-finding and contact tracing, training and on-site implementation support for scale-up of ART provision in TB clinics, supporting the development of community-based support program for TB and ART medication adherence, and providing TA for the decentralization of TB screening, diagnosis, and treatment initiation to peripheral clinics. We will help the NTCP and SNAP scale up Isoniazid preventive therapy for PLWHA and strengthen provider-initiated HIV testing and counseling in TB diagnostic units.

2.8 Tanzania

Overview of HCI's Program in FY09

What we are trying to accomplish	Geographic scale	Population coverage
Develop a national partnership for QI of ART/ PMTCT services with the	Nationwide	Approximately 40 million, with an adult HIV prevalence of 5.7%: 1.5–2 million PLWHA and about 247,000

What we are trying to accomplish	Geographic scale	Population coverage
MOHSW's National AIDS Control Program (NACP) and PharmAccess		on ART
Use the collaborative improvement approach to improve ART/PMTCT care outcomes and coverage and facilitate the scale-up of continuous quality improvement (CQI) in ART/PMTCT through regional partner collaboratives, working with NACP and PharmAccess to improve the capacity of care and treatment partners and regional and council health management teams (RHMTs and CHMTs) in implementing QI in ART/ PMTCT care	Four out of 21 regions: 19% of mainland regions	Approximately 6.6 million population
	Morogoro Region: 8 facilities (6 district hospitals and 2 health centers)	Approximately 2.5 million, with an adult HIV prevalence of 4.2%: 88,500 PLWHA, about 9,000 on ART
	Mtwara Region: 8 facilities (6 government district hospitals, a mission hospital, and a health center)	Approximately 1.2 million, with an adult HIV prevalence of 3%: 38,096 PLWHA, about 5,700 on ART
	Lindi Region: 10 facilities (5 district hospitals, 2 mission hospitals, and 3 health centers)	Approximately 900,000, with an adult HIV prevalence of 3.9%: 34,000 PLWHA, about 3,600 on ART
	Tanga Region: 8 district hospitals	Approximately 2 million, with an adult HIV prevalence of 3.8%: 71,000 PLWHA, about 11,300 on ART
Expand training for infant-feeding (IF) counseling to cover all the regions	19 out of 26 regions (about 73% of all regions, including the mainland and Zanzibar, have received training.	Through this process, about 70% of the total population gained access to IF counseling training in the context of PMTCT.
Provide technical assistance in QI to OVC implementing partners, including the Department of Social Welfare	We are working with 10 implementing partners covering 97 out of 127 districts (76%) in mainland Tanzania,	By August 2009, the number of identified vulnerable children was 713,597; among them 586,170 (82%) received basic support. PEPFAR support was received by 290,341children (58% of those receiving basic support).

Main Activities and Results

Develop a national QI guideline and training manual for HIV/AIDS prevention, care, treatment, and support services

HCI provided technical leadership this year at the national level, assisting NACP and guiding implementing partners in the process of developing QI guidelines for HIV and AIDS services. Several work sessions by the TWG and consultations and reviews by various stakeholders have resulted in finalized guidelines; they will be printed and disseminated at all care levels in FY10.

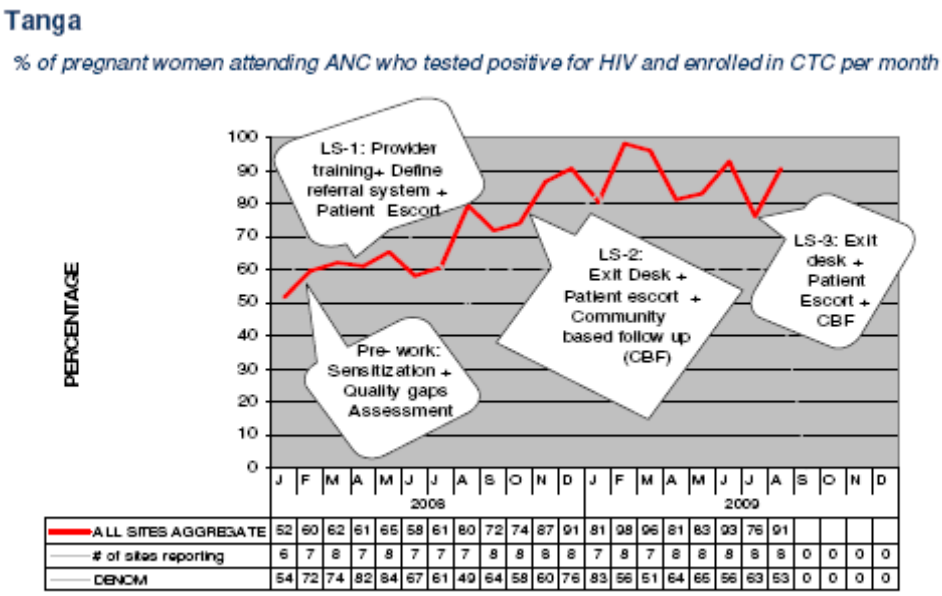
HCI led the production of the first draft of the QI training manual for ART/PMTCT services, working with several other partners, including PharmAccess, the Elizabeth Glaser Pediatric AIDS Foundation

(EGPAF), the Clinton Foundation, FHI, AIDS Relief, and the WHO. The draft manual drew from generic HCI training manuals and is under review by the NACP technical team to ensure consistency with wider MOHSW training goals and with the context of Tanzania health service provision. Once final, the manual will be used to train RHMTs and CHMTs in other regions to enable rapid spread of the approach to improving care and treatment outcomes for PLWHA.

Support implementation of a regional partner collaborative

HCI Tanzania has established four ART/PMTCT improvement collaboratives involving 40 health facilities in four regions: Tanga, Morogoro, Mtwara, and Lindi. Through this approach, we are building the capacity of RHMTs, CHMTs, and ART/PMTCT providers across these regions in modern QI methods to enable not only analysis and redesign of essential ART/PMTCT care delivery processes but also systematic documentation and evaluation of improvements through tracking of priority ART/PMTCT monitoring indicators against set targets. QI teams participating in the first collaborative in Tanga have achieved results on key indicators above 80%, as seen in Figures 13–15. Table 4 summarizes the successful changes that have been introduced by teams in all four regions.

Figure 13. Tanzania: Percentage of pregnant women attending antenatal care who tested HIV-positive and enrolled in treatment, Tanga Region, FY08 and FY09



	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D
ALL SITES AGGREGATE	52	60	62	61	65	58	61	80	72	74	87	91	81	98	96	81	83	93	76	91				
# of sites reporting	6	7	8	7	8	7	7	7	8	8	8	8	7	8	7	8	8	8	8	8	0	0	0	0
DENOM	54	72	74	82	84	67	61	49	64	58	60	76	83	56	51	64	65	56	63	53	0	0	0	0

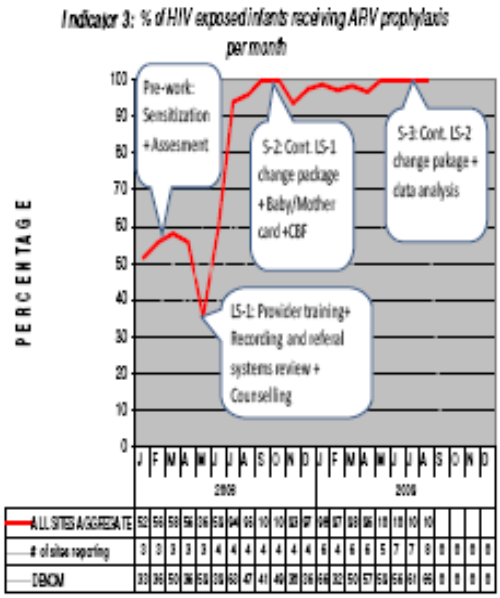
Integrate infant-feeding counseling into PMTCT services: national rollout

HCI provided technical assistance to EGPAF and EngenderHealth as well as Muhimbili-Harvard in FY09 to conduct infant-feeding counseling training in Rombo, Newala, Mafinga, and Babati districts. We also worked in Iringa, Manyara, and Dar es Salaam regions, training 16 trainers and 98 counselors. This training program covered 19 of the country's 26 regions. We also worked closely with the Tanzania Food and Nutrition Center and the Ministry's PMTCT unit to finalize the National Infant Feeding Counseling Training Manual to be used to train national trainers.

Figure 14. Tanzania: Percentage of HIV-exposed infants who received antiretroviral prophylaxis, Tanga Region, FY08 and FY09

Figure 15. Tanzania: Percentage of HIV-exposed infants under 18 months who received daily Cotrimoxazole, Tanga Region, FY08 and FY09

Tanga



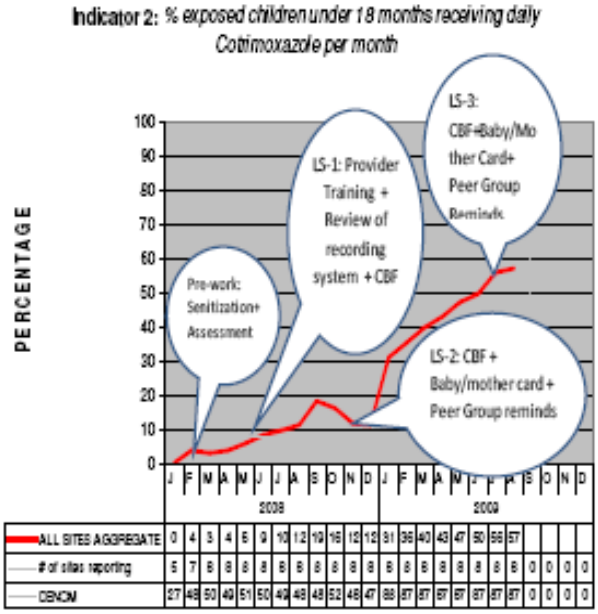


Table 4: Tanzania: Innovations shared by QI teams during learning sessions of regional partner collaboratives, FY09

Improvement objective	Innovations shared
Reduce loss to follow-up/ improve retention	Introducing exit desks to remind patients about next clinic appointments, where to seek help in case of problems, and counseling on drug adherence Forming treatment support groups ("buddy groups") where clients in an area encourage each other on drug adherence, keeping clinic appointments, and even delivering drugs to a neighbor who cannot visit the clinic for a refill Using home-based care (HBC) workers, volunteer health workers (VHWs) and village leaders to verify clients' addresses and status (deceased, transferred to another health facility, or stopped treatment) Using treatment supporters from CBOs Issuing a two-month supply of ARV drugs to clients residing far from refill centers Organizing the patient filing system for easy retrieval and storage Verifying loss to follow-up data and cleaning strategies in care and treatment centers (CTCs)
Increase enrollment of HIV-positive pregnant women into care and treatment centers	Having health care providers escort HIV-positive pregnant women from MCH clinic or labor ward to CTC Sharing names and referral slips of HIV-positive mothers among MCH clinics, labor wards, and CTC providers to monitor number of referrals across providers Counseling and testing pregnant women with unknown HIV status during labor and delivery, thereby enrolling those found positive into CTC Postponing discharge of HIV-positive mothers who have delivered until further counseling and enrollment in CTC

	Linking the number of HIV-positive women tested at MCH clinics and labor wards with that in the CTC database and addressing discrepancies
Expand delivery of Cotrimoxazole prophylaxis to HIV-exposed infants under 18 months	Establishing mother-child register to link HIV-exposed children with their mothers for close follow-up Issuing Cotrimoxazole in MCH clinics rather than at CTC only, which is associated with low presentation of HIV-exposed infants Using HBC providers to track infants who have missed appointments Establishing exit desks to reminding mothers of next appointments for Cotrimoxazole
Scale-up strategies	Establishing satellite CTC clinics in existing health centers and dispensaries within districts Establishing mobile/outreach CTC clinics to bring services closer to more PLWHA
Screen for active TB during consultations	Preventing stock-outs of TB screening tools by forecasting and ordering together with other stationery Embedding TB screening tools in patients' files to ensure continuity of screening and record keeping
CD4 testing	Having CD4 testing appointment register at CTC
	Taking blood for CD4 testing on the same day as the HIV diagnosis
	Improving sample collection, storage, and transport procedures
	Removing unnecessary/redundant steps to shorten turnaround for CD4 lab results

Improve services for most vulnerable children

Late in this fiscal year, HCI was asked by the USAID Mission to support the MOHSW's Department of Social Welfare (DSW) and OVC implementing partners in improving the quality of services provided to the most-vulnerable children affected by HIV/AIDS. In response, HCI provided technical support to OVC implementing partners responsible for 97 of the 127 districts in Tanzania mainland. In addition, we are supporting the DSW and implementing partners to develop a facilitators' manual for training district trainers of trainers (TOT) and coaches and for later scale-up training.

Directions for FY10

HCI will continue to implement ART/PMTCT Improvement Collaboratives in Morogoro, Mtwara, and Lindi regions while phasing out of Tanga. New ART/PMTCT collaboratives will be led by partners in Dodoma, Iringa, Mwanza, and Manyara regions. HCI will also help implementing partners roll out infant-feeding and counseling training to the remaining seven mainland regions not yet covered: Mwanza, Mara, Mbeya, Rukwa, Ruvuma, Singida, and Dodoma. New collaboratives to pilot test quality standards for OVC services will be introduced in three regions.

2.9 Uganda

Overview of HCI's Program in FY09

What we are trying to accomplish	Geographic scale	Population coverage
Improve HIV care	11 of 12 regions; 71 of 80 districts 137 of ~400 accredited ART sites: • Demonstration (started January 2006): 49 sites • First Wave (started January 2007): 32 sites • Second Wave (started January 2008): 31 sites • Support of District Phase 1 (started December 2008): 25 new sites	61,319 people on ART (of 153,718 ART patients countrywide)

Build a sustainable quality improvement structure that is integrated into all levels of the health system	34 of 80 district health teams	

Main Activities and Results

Improve HIV care

Uganda's collaborative improvement activities in HIV/AIDS services began in 2006 and grew to involve 120 sites in 71 of Uganda's 80 districts. These sites, which became engaged in ART improvement work as separate cohorts of teams in 2006, 2007 and 2008, have demonstrated results in TB screening, coordination of services, uptake of family planning counseling, and increased efficiency of lab services. This year, HCI continued support to these sites in the form of coaching visits, conducting 507 coaching visits to 136 sites between October 2008 and July 2009. We trained 753 individuals in HIV care and support and 1,484 in QI. Coaching visits offer an opportunity to assist health workers in improving care for their HIV-infected patients by making their care delivery system more efficient to reduce patient waiting time and care for more patients with the same resources. HCI-supported sites are also providing care that follows national standards: Over 95% of patients at our sites were assessed for TB at their most recent visit; over 95% of HIV-infected patients were prescribed Cotrimoxazole at their most recent visit; and the percentage of exposed children who were tested for HIV has risen from 60% to over 80% (see Figure 16). Figure 17 shows an increase in the percentage of patients on ART who had improved clinical status over the previous six months. The Second Wave are primarily Health Center IVs that were newly accredited to provide ART. The Health Center IVs started with much lower clinical improvement levels but made significant increases in a short period. The Demonstration and First Wave Collaboratives were completed in 2008 in order to transition to a new approach in 2009.

Figure 16. Uganda: Percentage of children born to HIV-positive mothers receiving PMTCT who were ever tested for HIV, three collaborative cohorts, January 2006– April 2009

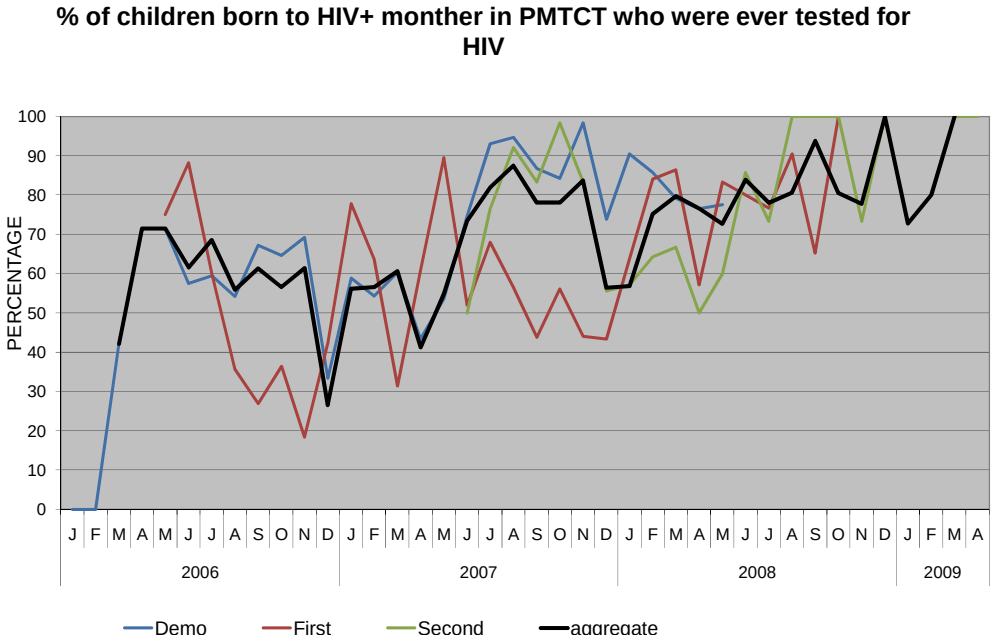
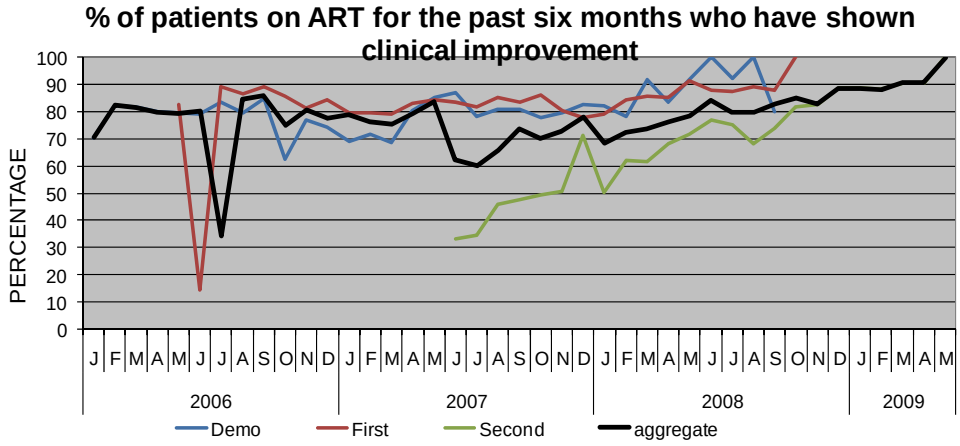


Figure 17. Uganda: Percentage of ART patients who showed clinical improvement in the previous six months, three collaborative cohorts, January 2006–April 2009



Sites in the third wave to join the improvement efforts came together in June 2009 to discuss best practices for improving TB assessment and treatment adherence. Changes introduced to ensure that patients are assessed for TB at every visit include monthly continuing medical education (CME) sessions and providing better orientation for counselors through on-the-job training and mentoring. In addition, TB assessment can be completed at triage by nurses and by "expert" patients (experienced TB patients who can advise other patients), with job aids displayed at the triage station, clinic rooms, and the wards serve as reminders. To improve treatment adherence, sites involved expert clients in the counseling process, held CMEs on adherence counseling, intensified ongoing adherence counseling, and began measuring adherence through pill counting and reporting. Sites also found improvements through the introduction of hand-held calendar reminders, health education on nutrition, and provision of two-month drug supplies to stable patients. ART patients' adherence improved through increased support from psychosocial support groups, family support groups, treatment supporters and community-level Village Health Teams.

These teams that have worked to improve HIV for one to three years have developed sophisticated improvement skills. Some had achieved some important gains in the quality of care, but some were still not fully addressing the biggest quality gaps in HIV and ART services. In response, we re-designed our Uganda program in FY09 into smaller, more narrowly focused improvement collaborative efforts that will be based on the Framework to Improve Care for Patients on ART (ART Framework), a tool designed to facilitate quality improvement for HIV/AIDS services. These collaboratives' key focus areas will be coverage of HIV services, patient retention, and clinical outcomes of patients on ART, together covering the continuum of care from C&T to treatment maintenance and outcome.

The strategy for these new collaboratives will allow site teams to address one of six identified sections of the continuum of care for HIV patients and determine which changes lead to improvement for that section. The MOH and HCI have planned six new collaboratives, each focusing on a different topic: 1) coverage with ART; 2) retention in care; 3) clinical management of HIV patients, including ART adherence; 4) lab services; 5) nutrition-HIV integration; and 6) records and data management. Each

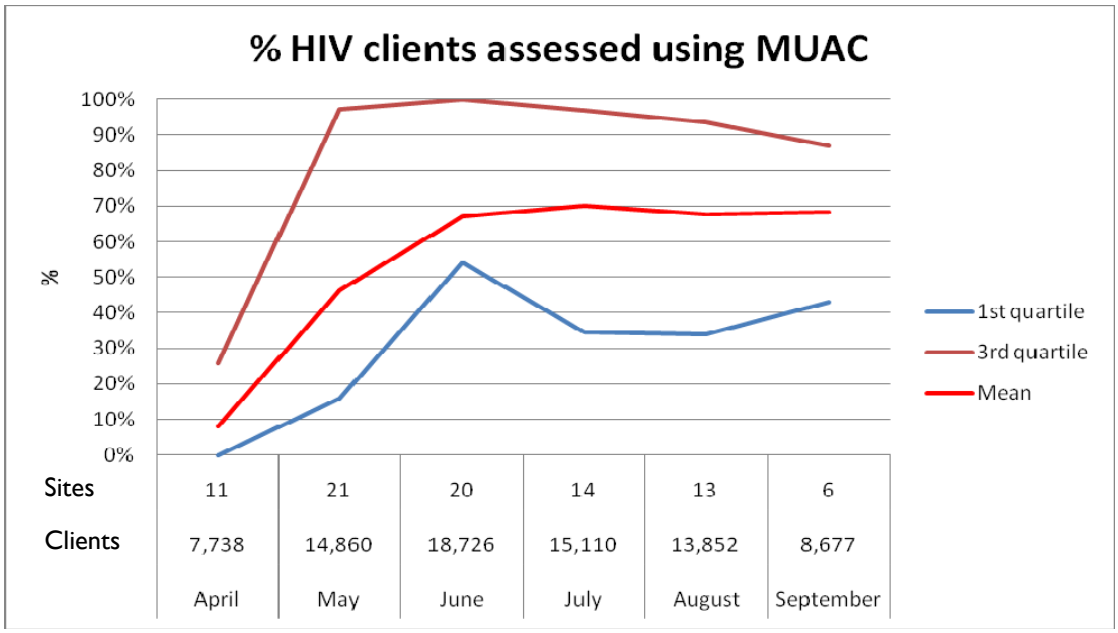
collaborative will produce a change package that can be adopted by other sites to comprehensively improve chronic care. To support this work, in April–May 2009, we conducted an in-depth baseline assessment of HIV testing and treatment monitoring in the labs in 10 facilities participating in HIV/AIDS improvement work.

New collaborative groups were formed in August, and 14 facilities are working on improving access to ART. This involves both improving 1) the efficiency of care delivery so that more people can be treated in a clinic without increasing staff and 2) links to HIV care from testing, PMTCT, and TB services. Thirteen sites are improving retention in care, and 14 are improving adherence and opportunistic infection prevention and treatment. In addition to these three sets of facilities, 14 facilities are addressing HIV-related lab services, starting with early infant diagnosis and CD4 testing for newly diagnosed clients; 12 are addressing HIV-related data management, including record storage, reporting, and the use of data for decision making; and 32 are integrating nutritional services and HIV care.

The new collaborative on nutrition integration emerged from a collaboration HCI began in FY09 with the USAID bilateral NuLife Project. NuLife has provided extensive technical support to the MOH in developing nutrition guidelines and curricula and training staff. NuLife targeted HCI sites to roll out the program initially to build on the QI structure HCI had put in place. One of the challenges in integrating nutrition and HIV care is that in a busy HIV clinic, it can be hard to find time to properly address nutrition issues: Since patients are not likely to die of malnutrition in the short term, health providers tend to prioritize acute conditions and disregard or under-treat chronic problems such as nutrition. The QI team must, therefore, create enough time for routine nutrition care. HCI-supported facility-based teams were asked to apply their QI skills to implement the good nutrition care the NuLife project had taught them. These sites have been concentrating on improving nutrition assessment and linking severely and moderately malnourished patients with ready-to-use therapeutic food (RUTF). Regional MOH QI coaches trained and supported by HCI are supporting these sites.

Since the April 2009 rollout of the nutrition intervention, over 14,000 people have been assessed for nutrition status (69% of all patients seen in these clinics), and over 3000 have been identified with malnutrition and provided with RUTF. Figure 18 shows that sites have increased the proportion of HIV patients who are assessed for nutritional status. To date, 1,019 patients have been prescribed RUTF.

Figure 18: Uganda: Percentage of HIV patients assessed for malnutrition at HIV clinics using Mid-Upper Arm Circumference (MUAC), April–September 2009



Build a QI structure that is integrated into all levels of the health system

In December 2008, HCI began working with district level health teams to improve the quality of ART services in 15 districts in Uganda. District Quality Improvement Teams (DQITs) were formed from the District Health Teams (DHT) and additional key personnel from facilities throughout the district. The expanded team was necessary due to time constraints of the DHT and geographical considerations for ease of coaching visits. Each district chose three facilities to participate in the demonstration phase. Ideally this included one site previously involved in the ART collaboratives and two new sites that had not previously participated in quality improvement activities. In districts lacking an accredited ART site, the district is working only with one new site. In total, 25 sites with no previous QI experience are being supported by districts. DQIT members were trained in QI and coaching skills, which was followed by an HCI-conducted training for participating teams in each district. The QI methods training attracted 531 staff from the 15 districts. We also provided training in HIV care to 55 district level managers who had not previously received training in technical aspects of HIV care. The HCI Standard Evaluation System tools were introduced to the district sites to guide and document improvement activities.

HCI and the DQIT jointly conducted the first few months of coaching visits to mentor and build skills for QI coaching at the district level. As the activity progressed, we saw an opportunity to improve our DQIT work by giving them hands-on experience with a QI activity in their own area. During the second learning session for the first 15 districts, in May 2009, DQIT representatives discussed possible processes to improve in their work. Logistics management, organization of supervision visits, and human resources management emerged as key areas for improvement. DQITs also shared their experiences on changes they had made, such as informing district political leaders about QI activities to garner local government funds for extra site visits; temporarily assigning staff from new ART sites to successful, experienced sites for mentoring; encouraging coaching by peers; and supporting facility-level QI teams to make changes in the organization of ART care. While HCI is funding this year's site visits, we are working with the districts to budget for QI for the Ugandan fiscal year starting in July 2010.

DQITs have continued to work on improving their ability to supervise direct care providers in their districts. This included working on a system to visit sites regularly and improving coaching skills to help sites improve care and began measuring the number of supervisor visits and the percentage of sites in their district that were visited each month. All 15 DQITs have held monthly meetings to plan QI activities in their districts, review site performance, and design interventions to support site teams to more effectively improve HIV/AIDS care. HCI has designed coaching tools for DHTs to support their supervision of site-level QI activities.

Figures 19 and 20 present data from the QI naïve sites supported by the districts. Ten of the 25 sites started working in February to improve adherence, first collecting baseline data and then working to improve adherence. The aggregated data increased from 83% to 93% between February and September 2009. In addition to helping improve processes of care, the DQITs have helped some of the new health facilities become accredited, improve the availability of drugs and patient monitoring tools (medical records and registers), and link providers with training. Data were collected from 17 facilities and compared their status on six factors in January 2009 and in August 2009.

While the intensity of HCI support to the initial 15 districts is being reduced, 24 new districts will join the collaborative in FY10, increasing the proportion of participating districts to 49% (39 of 80 districts). The new districts were selected in August based on criteria determined with the MOH. The criteria included presence of sites accredited to offer ART, regional balance, existence of strong supervision support, presence of partners and resources complementary to QI, district willingness to participate in quality improvement activities, and HIV prevalence.

Figure 19. Uganda: Percentage of patients on ART who adhered to ARV medications, 10 sites, September 2008–September 2009

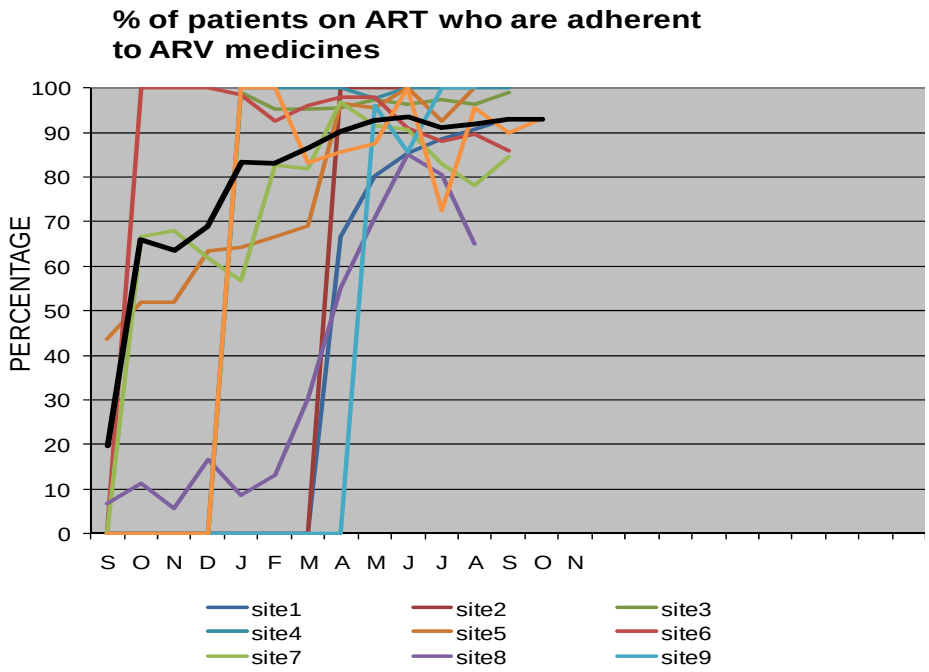
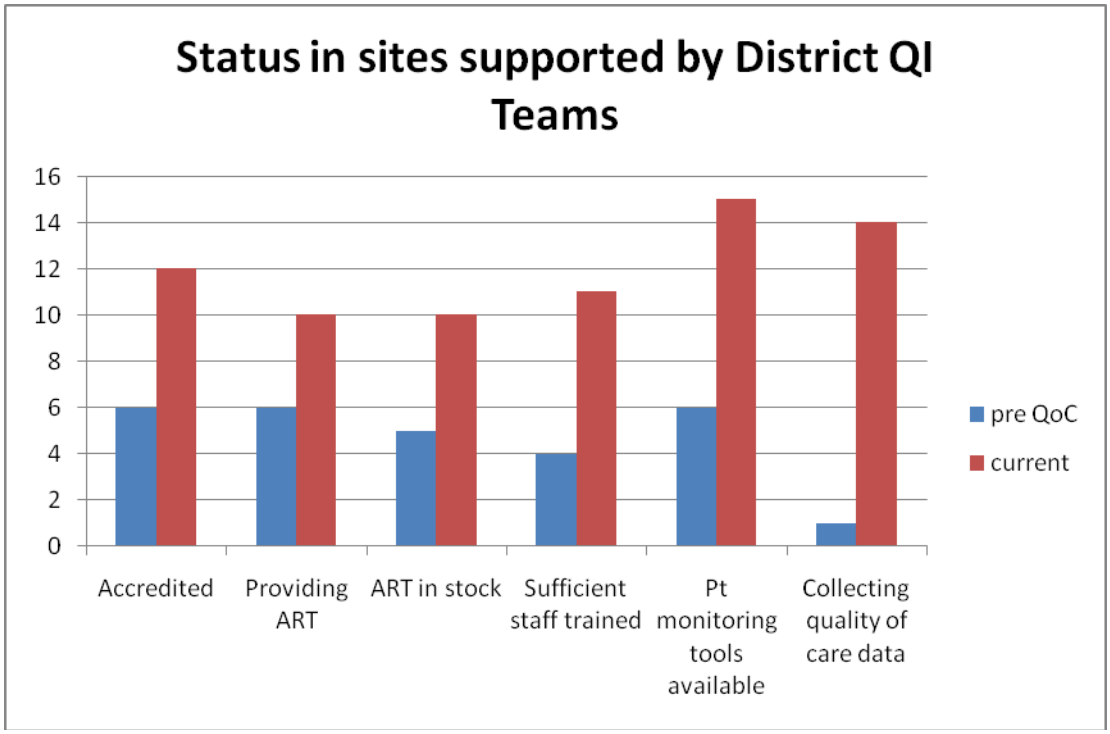


Figure 20: Uganda: Status of sites supported by DQITs, before and after QI intervention



Other national-level support to the Ministry of Health

During FY09, HCI seconded a staff member to the MOH, filling the position of National Quality of Care Coordinator. He has participated in the Early Warning Indicators for Drug Resistance program, training and supervising field officers and validating data from six sites in Masaka and Mbarara regions. He also assisted the AIDS Control Program in developing materials and curricula for training health care workers on the use of new patient monitoring tools. HCI also sponsored training for over 70 people in Mbale Region in the use of the new tools.

Lastly, we sponsored top MOH management (the Permanent Secretary, Director General, Director of Clinical Service, and several Commissioners and Assistant Commissioners) to attend integrated supportive supervision visits to hospitals in all regions of the country. These visits allowed senior managers to see conditions at the sites they support. The Director General was able to talk to a building contractor to speed up construction of a new health center in Ibanda District, and the Director of Clinical Services convinced the Chairman of Arumu District to fast track contracts for staff in Amuru Hospital who had been working without contracts or pay for over two years. The medical superintendent of Gulu Regional Referral Hospital told us he had never seen a visit like this in his 20 years in the system and that it was a very important and useful approach.

Directions for FY10

Our priorities in FY10 will be to show improvements in the new areas we are working in as well as identify best practices in improving access to ART, retention in care, health outcomes, lab services, and data management and integrating nutrition and HIV care. We will also work to develop a QI approach appropriate for the private sector. Another priority will be to increase program sustainability by increasing the role of peripheral MOH staff, including district staff.

ASIA

2.10 Afghanistan

Overview of HCI's Program in FY09

What we are trying to accomplish	Geographic scale	Population coverage
Support the Ministry of Public Health in building improvement capability nationwide to adapt and apply the science of health care improvement to the Afghanistan health care system and context	Nationwide: 34 provinces	26 million
Demonstrate how specific improvements can be accomplished in maternal and newborn health in three provinces: Balkh, Kunduz and Kabul (Phase One)	Kabul: Malalai hospital and three additional public and private hospitals Kunduz and Balkh: 2 districts per province	Malalai hospital: approx 40,000 births per year Balkh: 533,518 out of 1,144,800 Kunduz: 477,677 out of 882,900

Main Activities and Results

HCI officially launched its Afghanistan program in the second quarter of FY09. After negotiations with USAID and the Ministry of Public Health (MOPH), it was determined that HCI would focus on maternal and child health in Balkh, Kunduz, and Kabul provinces as the initial locations for the demonstration phase of HCI work. Neither Balkh nor Kunduz receives other USAID-supported assistance.

The project was officially inaugurated January 27 at a ceremony convened by the Deputy Minister of Health; the USAID Deputy Mission Director; the USAID Health Team leader; and HCI Project Director,

Dr. M. Rashad Massoud. Participants included representatives of the MOPH, provincial public health departments (PPHDs), United Nations agencies, the European Union, and implementing NGOs. HCI next led a one-day planning session with implementing partners from Kunduz, Balkh, and PPHD and central MOPH officials. The session resulted in the selection of districts and sites for the demonstration phase. After review of existing data and discussion of improvement priorities, both Balkh and Kunduz selected "Safe and Healthy Deliveries" as their improvement priority.

A decision was made to include two districts and Malalai Hospital in Kabul province in the initial HCI improvement activities due to the hospital's large number of deliveries and because a Kabul-based improvement activity would enable senior MOPH officials to gain first-hand experience with the improvement work.

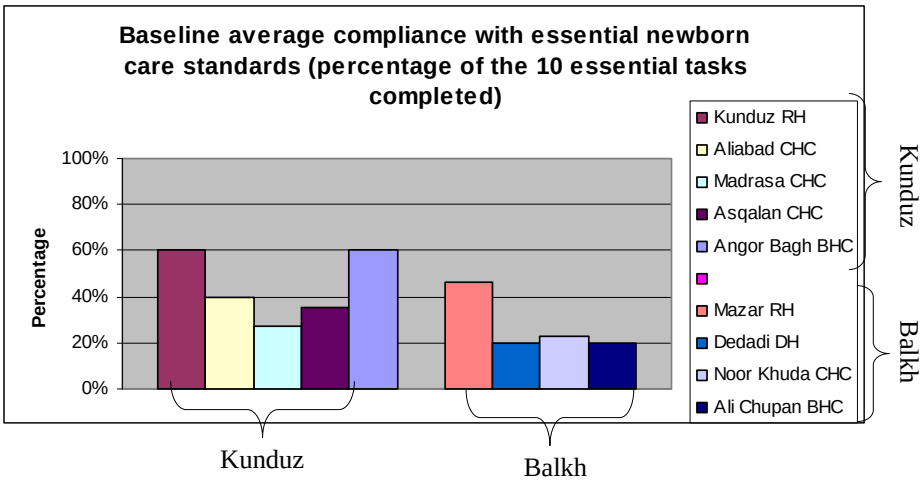
Facility- and community-level maternal and newborn care collaboratives

The initial (or "demonstration") phase of the work in Kunduz and Balkh will develop and test a scalable model of antenatal, delivery, and postpartum care interventions, linking the different levels of care, from that in the home and community by traditional birth attendants and community health workers all the way through to health posts, basic health centers, comprehensive health centers, and district and regional hospitals. HCI and Afghanistan-based experts developed a change package for the facility and community collaboratives based on high-impact, evidence-based interventions in maternal and newborn care from other HCI collaboratives.

HCI led two orientation sessions for teams participating in the facility and community collaboratives. The Balkh session, May 6–7, attracted QI team members from 11 health facilities and two health posts, while the one in Kunduz, May 12–13, had participants from 18 health facilities and two health posts. Also participating were provincial MOPH officials and staff from NGO implementing partners. The sessions introduced the project and improvement methodologies, including the improvement collaborative approach.

HCI worked with the provincial MPH to establish provincial QI teams in Balkh and Kunduz that will, in turn, support facility-level teams. In July, HCI conducted a baseline assessment for facilities in both provinces to assess the quality of antenatal, postpartum, and newborn care and provider counseling in antenatal and postnatal care as well as the availability of essential medications and materials. Figure 21, presenting baseline data on average compliance with essential newborn care standards, shows the low level of compliance with standards that the collaborative seeks to improve. The first learning session with facility teams from the regional hospitals, district hospitals and health centers is planned for October.

Figure 21. Afghanistan: Baseline facility assessment findings for essential newborn care, Kunduz and Balkh provinces, 2009



The HCI-Afghanistan Community Essential Obstetric and Newborn Care (EONC) Collaborative strategy was developed this

year and presented to the MOPH Community-based Health Care Department and other stakeholders. The community collaborative objectives are to increase the quality and uptake of ANC and postpartum community-level services and strengthen community-to-facility linkages for increased uptake and coverage of skilled birth services, including prompt referral and management of maternal/newborn complications. The collaborative will be implemented in a set of health posts near three selected health facilities in each participating province.

Kabul Maternity Hospital Collaborative

HCI worked closely with the MOPH, the U.S. Centers for Disease Control and Prevention (CDC), and UNICEF to develop the design of and plans for the Kabul Maternity Hospital Collaborative, which will focus on improving cesarean sections, provision of active management of the third stage of labor (AMTSL), post-partum family planning counseling, and other high-impact interventions in four public hospitals in Kabul: Malali Maternity Hospital, Esteqlal Hospital, Khairkhana Hospital, and Rabia Balkhi Hospital. Three private hospitals (Shinozada Hospital, Afghan Hospital, and Mihdi Hospital) providing maternity care and cesarean sections will also participate. The private hospitals were selected based on a situational assessment conducted in the eight main private hospitals in Kabul City. HCI's role in this collaborative will be to provide TA and build capacity for QI among the partners, support the collaborative's rollout for improving maternal and perinatal outcomes, and adapt and scale up successful interventions implemented at Rabia Balkhi Hospital to the other participating hospitals. In August, HCI held a one-day orientation workshop for the hospital directors and hospital team members on the collaborative's design.

Support the MOPH to develop capacity for quality improvement

HCI was selected as the lead implementing partner to support the MOPH in coordinating programs to improve the quality of health services. HCI will be responsible for supporting the development of the Quality Improvement and Assurance Department (QAID) within the MOPH. This department will coordinate and strengthen the relationship between MOPH and all its partners; review and adapt QI methods and tools; oversee quality interventions; share information and lessons learned with stakeholders; technically support provincial QI committees; and recognize and reward achievement of best practices/performance at health facilities. HCI has held meetings with the MOPH and other partners to initiate the development of a national QI strategy and has supported the development of Terms of Reference for the department and its staff.

URC consultant Cathy Green facilitated a two-day workshop on Modern Quality Improvement at the Kabul office June 17–18 for MOPH central and provincial officials, staff of implementing NGOs, and technical partners, such as Management Sciences for Health and Jhpiego. The workshop introduced modern improvement science; illustrated how it can contribute to significant improvements in health care; and introduced models to test ideas, demonstrate efficacy, and sustain and then spread improvements.

Directions for FY10

HCI will continue to implement the demonstration phase of the maternal newborn care facility collaborative and community collaborative but expand their scales to include three new provinces in the country and additional sites in Kunduz and Balkh. We will continue to support the Kabul Maternity Hospital Collaborative and support the MOPH to establish a Ministry unit for quality improvement and assurance, and we will help develop a national strategy for quality improvement and assurance. Also, we will implement two research studies, one to document progress of QI activities in the community collaborative and one to examine the cost-effectiveness of using QI methods to increase uptake and quality of high-impact community and facility maternal newborn services.

2.11 Indonesia

Overview of HCI's Program in FY09

What we are trying to accomplish	Geographic scale	Population coverage
Develop a tuberculosis CD-ROM and computer-based training (CBT) package in Bahasa, Indonesia, for medical practitioners, especially the private sector	All provinces	Approximately 65,000 private practitioners

Main Activities and Results

Develop a plan for a TB case management computer-based training product

URC's Dr. Pankaj Sadaphal visited Indonesia in January 2009 to meet with USAID, the NTP, and Tuberculosis Control Assistance Program (TBCAP)/Royal Netherlands Tuberculosis Association (KNCV) representatives to discuss a proposal for the development of a CBT product in Bahasa. The product, which could be produced as a CD-ROM or made accessible via the Web, would be based on the TB CD-ROM previously developed by the Quality Assurance Project in 2000, but updated to reflect the Stop TB strategy and other developments in case management, including management of TB-HIV co-infection.

While in Indonesia, Dr. Sadaphal participated in Advanced Course on DOTS Acceleration, jointly organized by KNCV and NTP February 2–9, and was able to engage in informal conversations with the NTP Manager. He also attended a TB Experts Meeting in Jakarta. Lastly, he identified information technology firms in Indonesia to assist with the CD-ROM programming.

It was agreed that one target audience for this CBT may be private hospitals and practitioners. About 50% of patients receive care in the private sector, yet the NTP has been unable to reach private doctors and hospitals with newer messages on TB diagnosis and treatment. About 65,000 doctors are members of the Indonesian Medical Association, so it may be a worthwhile training affiliate.

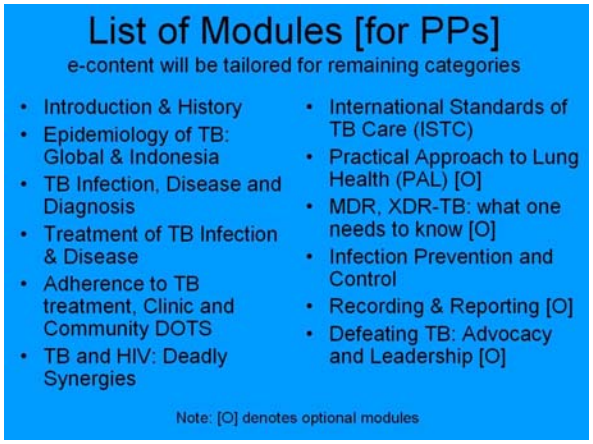
Dr. Neeraj Kak visited the USAID Indonesia Mission in May to continue discussions with USAID and the NTP. He met with faculty of the University of Gadjah Mada (UGM) in Yogyakarta to negotiate collaboration on the CBT.

Develop storyboard for CBT content

A first draft of the storyboard (screen content) for the CBT was shared in August 2009 with USAID/ Indonesia, the TBCAP, UGM, and the NTP. The scope is being broadened to suit not only private practitioners, but also certain other government health personnel, such as nurses. In his meetings with representatives of the Indonesian Medical Association, Dr. Sadaphal outlined strategies for making the TB CD-ROM available to the country's private practitioners. He also identified an Indonesian multi-media firm able to program the CD-ROM and a Web version.

TB experts reviewed the draft storyboard (Box 2 lists proposed modules). The content incorporates the International Standards for Tuberculosis Care as well all the elements of the Stop TB strategy. A second, more condensed version is being prepared for sharing with the NTP, USAID, TBCAP, and

Box 2: Indonesia: List of modules for the TB CBT



UGM. For later versions, UGM will collaborate on technical content and in-country facilitation. Both the NTP and Indonesian Medical Association will serve as conduits for dissemination.

Directions for FY10

After a final review of the revised storyboard, programming of the CBT product will begin in Indonesia. If feasible, a rapid needs assessment for training of medical practitioners and health workers will be implemented. The prototype CBT will be pre-tested with NTP personnel and refined based on feedback. The next version will be shared with NTP, MOHFW, USAID Indonesia, and TBCAP for final approval and then produced.

EUROPE

2.12 Russia

Overview of HCI's Program in FY09

What we are trying to accomplish	Geographic scale	Population coverage
Increase coverage of HIV patients with basic medical follow-up, ART, and testing for TB through a wide implementation of tools (algorithms, rayons' plans, referral mechanisms, recording forms) that were jointly developed and tested by the project teams in 2004–2007	The city of St. Petersburg (including all 18 city rayons): all specialist HIV and TB facilities and 42% of rayon general health facilities ("polyclinics") Leningrad Oblast: Tosnensky and Vsevolzhsky rayons: 100% of TB specialist facilities and 100% of rayon general health facilities Orenburg Oblast: The city of Orenburg and three main cities in the Eastern Zone (Orsk, Novotritsk, and Gai): 100% of specialist HIV and TB facilities and 100% of rayon general health facilities	St. Petersburg: 19,500 HIV patients registered for medical care Tosnensky and Vsevolzhsky rayons: 1,603 HIV patients registered for medical care City of Orenburg and the other three cities: 7,400 HIV patients registered for follow-up care
Improve provider skills in VCT	Same as above	Most-at-risk populations and their partners in St. Petersburg: 120,000 Most at-risk populations and their partners in Orenburg, Orsk, Novotroitsk, and Gai = 60,000
Expand access to substance abuse treatment and rehabilitation for most-at-risk populations and patients with HIV in St. Petersburg	3 of St. Petersburg's 18 rayons	Estimated target population is 3,000 (5,500 HIV-positive patients, of whom 60% are estimated to have acquired HIV through intravenous drug injection)
Institutionalize models of municipal social services for HIV-infected family members	9 of St. Petersburg's 18 rayons, representing 50% of socials services, 60% of pediatric polyclinics, and 50% of women's consultations	2,210 HIV-infected mothers and children born to them

What we are trying to accomplish	Geographic scale	Population coverage
(developed with the support of the St. Petersburg city government)		
Improve MCH and reproductive health care	In 3 oblasts (Kostroma, Yaroslavl, and Tambov) of the country's 89, serving approximately 30 rayons (half the rayons in the 3 oblasts), covering 30–50% of the facilities in each rayon and 22 facilities in all	820,000 women of reproductive age and 20,000 births per year in the three regions, covering about 500,000 women and infants

HCI assisted local governments and health care delivery facilities in Russia to apply QI methods in two different areas of care this year: 1) HIV/AIDS and TB-HIV integration, working in the city of St. Petersburg and Leningrad and Orenburg oblasts through six collaboratives and 2) the "Improving Care for Mothers and Babies" initiative, begun in FY09 to help counterparts in three Russian oblasts reduce rates of maternal and infant mortality and morbidity and abortion through more appropriate use of family planning and modern contraceptive methods.

The three new maternal and infant collaboratives build on the successes and models developed since 1992 through USAID-supported maternal and child health projects in Russia, including MCH activities begun in Tver Oblast and spread to 11 others through the Quality Assurance Project; the evidence-based improvements introduced through the project "Mat I Ditya"; the Healthy Russia project's activities in reproductive health; and activities to prevent child abandonment carried out under "Assistance to Russian Orphans." This initiative is also promoting the dissemination of other successful international models such as UNICEF's "Baby-Friendly Hospitals" and "Youth-Friendly Clinics," the WHO partograph and associated guidelines for preventing pregnancy complications, and evidence-based interventions already incorporated in Russian regulations, standards, and practice guidelines issued by major medical societies and institutes. The MCH work is being closely coordinated with the efforts of the Ministry of Health and Social Development (MOHSD) and leading Russian institutions in the issuance of up-to-date regulations and clinical guidelines and is helping to put these new standards into practice.

Main Activities and Results

Increase coverage of HIV patients with basic medical follow-up, ART, and testing for TB in St. Petersburg and Leningrad and Orenburg oblasts

HCI focused its technical assistance in FY09 to teams from all 18 rayons of St. Petersburg on organizing medical follow-up of HIV patients at local polyclinics and introducing a new practice of TB screening among HIV patients into regular medical examination of HIV patients at local polyclinics. The practice was originally developed and tested by the HCI-assisted team from the pilot in St. Petersburg's Krasnogvardeisky rayon in 2004–2006. Two learning sessions in December 2008 and June 2009 and a November 2009 meeting of project coaches focused on issues related to HIV care decentralization, including TB screening among HIV clients. Care processes that were the focus of improvement efforts promoted among teams were: 1) organizing the process of taking blood samples in polyclinics and sending them to the AIDS Center for viral load and immune status testing; 2) improving retention in care and adherence to ART through improved cooperation between infectious disease specialists in polyclinics and social workers and improved maintenance of patient confidentiality; 3) improving the exchange of information relative to X-rays between polyclinics and the AIDS Center; and 4) improving care coordination between medical and social facilities in St. Petersburg.

At the June learning session, participants from the city's polyclinics and TB dispensaries agreed on several changes that could be implemented citywide to expand access to HIV care through task shifting to polyclinics. Rayons identified ways to organize blood testing for immune status at the polyclinic level, including the need for additional supplies (vacutainers), and the AIDS Center lab agreed to reorganize work schedules and provide training for lab personnel at polyclinics to ensure collection of blood samples for immune status and proper transport to the lab. Participants agreed that a pocket booklet for an HIV patient with a medical check-up list and service locations could be a valuable patient resource, and several rayon teams agreed to collaborate with representatives of the NGO "Humanitarian Action" to develop and test such a booklet. Participants also agreed on the need to measure the quality of HIV patient medical follow-up at the polyclinic level using a chart audit approach to periodically review completeness of patients' medical records according to established standards. HCI committed to provide technical assistance with the chart audit.

Another important area of FY09 progress was in early detection of TB among HIV patients. On April 6, the City Health Care Committee issued Decision #201-r on "Early TB detection among HIV-positive people," which was based on progress by the HCI-assisted teams. The Decision describes the process of three-component screening (chest X-ray, PPD, and microscopy) to be implemented by infectious disease specialists at the polyclinic level, as well as indicators and reporting requirements on the results of the screening. The Decision was endorsed by MOHSD's TB/HIV Center.

To facilitate implementation of this Decision, HCI assisted with the development of a training course, "Early Detection of Tuberculosis in HIV Patients at Polyclinics," for infectious disease specialists, radiologists, and primary-level lab staff. The first training took place September 2–3 at the City's TB Dispensary with the active participation and support of its head physician; the training attracted 47 polyclinic infectious disease specialists, radiologists, and primary care lab staff.

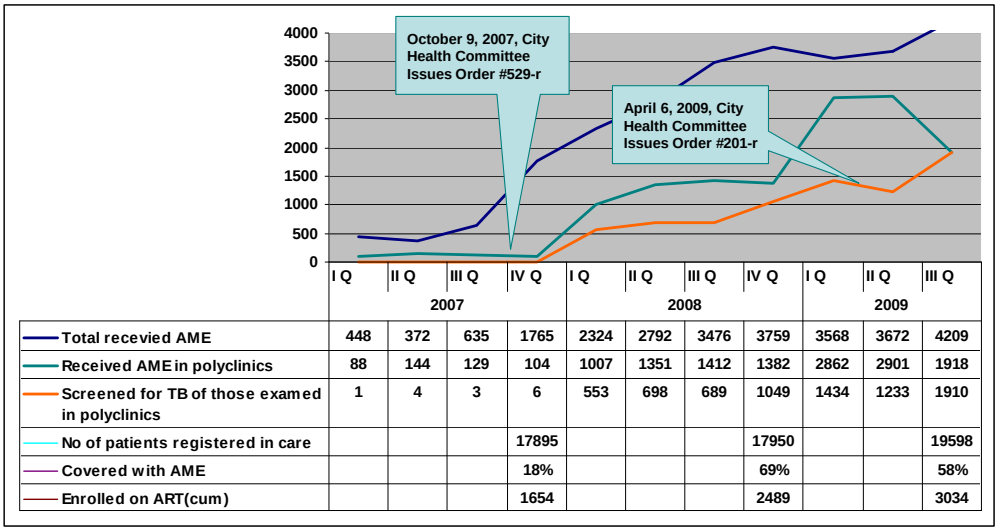
As seen in Figure 22, decentralizing TB screening to polyclinics and making it more accessible for PLWH resulted in increased number and proportion of HIV patients receiving medical examinations in all health care facilities, including polyclinics. Summer vacations caused a decrease in the number of patients undergoing medical follow-up in the third quarter of 2009.

During the first quarter of FY09, HCI continued to support teams in Orenburg, Orsk, Novotroitsk, and Gai by providing TA in implementing Oblast Order #666, enacted in May 2007 with inputs from the HCI-assisted teams, to require TB screening among HIV patients and provision of Isoniazid preventive therapy. Project teams in Novotroitsk, Gai, and Orsk reviewed their current practices and introduced changes to initiate TB screening at polyclinics. By the end of 2008, coverage of HIV patients screened for TB in health facilities in the Eastern Zone reached 93%, compared to 47% in 2007. In October 2008, the Oblast Ministry of Health informed HCI and other USAID implementing partners that given the oblast's location as a border area, the Ministry was withdrawing its support for it activities in the region: HCI was asked to minimize future activities in Orenburg. We received no further data from Orenburg after the second quarter of FY09.

Improve skills of providers in VCT in St. Petersburg and Orenburg

For the past two years, HCI supported the creation of a cadre of 587 providers from polyclinics, TB dispensaries, and ambulatory narcological clinics in St Petersburg, Leningrad, and Orenburg oblasts with the capacity to deliver high quality counseling for HIV testing. Forty-two of these providers were prepared as trainers who implemented their own training sessions. During FY09, these trainees trained 322 providers from 90 service outlets in St. Petersburg, with very limited support from HCI, and 21 trainings in VCT were conducted this year.

Figure 22. Russia: HIV-positive patients who received annual medical examinations at the City AIDS center and polyclinics, St. Petersburg, 2007–2009



	I Q	II Q	III Q	IV Q	I Q	II Q	III Q	IV Q	I Q	II Q	III Q
	2007				2008				2009		
Total recevied AME	448	372	635	1765	2324	2792	3476	3759	3568	3672	4209
Received AME in polyclinics	88	144	129	104	1007	1351	1412	1382	2862	2901	1918
Screened for TB of those examed in polyclinics	1	4	3	6	553	698	689	1049	1434	1233	1910
No of patients registered in care				17895				17950			19598
Covered with AME				18%				69%			58%
Enrolled on ART(cum)				1654				2489			3034

Data source: medical records of infectious disease specialists in polyclinics, AIDS Center

USAID HEALTH CARE IMPROVEMENT PROJECT

Note: AME is annual medical examination.

Expand access to substance abuse treatment and HIV care for St. Petersburg's most-at-risk populations

The main process changes promoted during FY09 through this demonstration collaborative involving three St. Peterburg rayons were to introduce an algorithm for early detection of drug abuse at polyclinics and referral of HIV clients for drug rehabilitation services, follow-up of intravenous drug users (IDUs) by social services at the rayons' ambulatory substance abuse services, improving information exchange between the narcological services and primary care services, and spreading educational materials about drug rehabilitation programs at the primary care level. The teams developed and disseminated an instruction booklet for rayon infectious disease specialists on identifying the signs of substance abuse to prompt providers to refer such patients for substance abuse treatment.

Improved referrals of most-at-risk populations to substance counseling and drug rehabilitation services in three rayons resulted in 198 referrals of clients who accessed drug treatment services, of whom 24 were enrolled in the substance abuse rehabilitation program. Approximately 300 friends and relatives of these clients were counseled on the risks of HIV infection and substance abuse. Before this activity started, the referrals and counseling by providers from the general care system hardly existed.

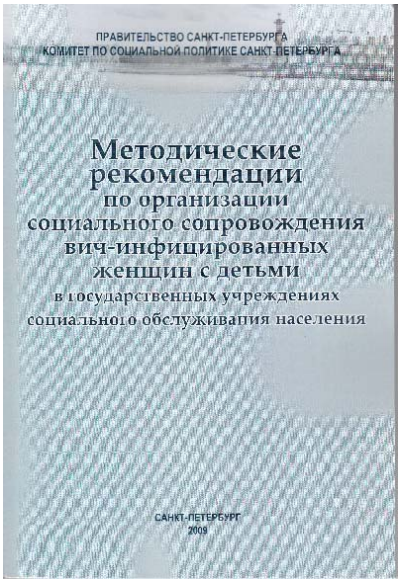
HCI assisted the teams to prepare a set of methodological recommendations for general health care providers on early detection of signs of drug abuse and timely referral for drug rehabilitation treatment. These recommendations are now under review by rayon health officials. The collaborative ended in September 2009; a final report on the results and lessons is in preparation.

Institutionalize models of municipal social services for St. Petersburg's HIV-infected families

HCI technical assistance to this demonstration collaborative involving social and health service providers in half of St. Petersburg's 18 rayons focused on helping rayon teams adapt best practices of follow-up of HIV-positive women and their children. It was developed by the NGO Doctors of the World and established unified procedures and forms for referral and follow-up. By October 2009, 323 HIV-infected pregnant women and mothers with children born to them had received social follow-up services in the nine participating rayons. Until 2007, such services were delivered only through the City's AIDS Center and few local NGOs.

A major FY09 accomplishment was facilitating the development of "Methodological Recommendations" (guidelines) by experts from St. Petersburg's Committees on Social Policy and on Health Care, QI team members from the nine rayons' departments of social services, the City AIDS Center, and local NGOs, based on the experience of the demonstration collaborative. The guidelines were approved by the City Committee on Social Development in July and published as Administrative Order #834 on "Organizing social support services for HIV-infected women with children in public welfare agencies."

The guidelines were presented September 30 at a city-wide conference for participants from all the government social and health services and key NGOs. The conference was jointly organized by the City's Committee on Social Policy and HCI and was endorsed by a representative of the Federal Service for Consumer Rights Protection and Human Well-being (Rospotrebnadzor). At Rospotrebnadzor's request, the guidelines were presented and distributed at the III International Conference on HIV/AIDS for Eastern Europe and Central Asia, held in Moscow October 28–30.



St. Petersburg City Administrative Order #834 on "Organizing social support services for HIV-infected women with children," issued in July 2009 to institutionalize best practices developed in the HCI-supported collaborative.

Improve MCH and reproductive health (RH) services in Kostroma, Yaroslavl, and Tambov oblasts

A baseline epidemiologic analysis of MCH/RH indicators was performed in each oblast in April and May 2009, followed by training in QI methods and MCH/RH best practices at the first learning session. This work has been organized into three oblast-wide collaboratives, each of which encompasses teams working on different care processes. In all, 22 facilities in the three oblasts are participating in the collaboratives. Learning sessions are held separately by oblast, but the collaboratives are sharing change packages, indicators, results, and progress through the project's web portal, www.healthquality.ru. Following the first learning session, teams of experts in QI, family planning, obstetrics, and neonatology visited each facility twice. Yaroslavl held its second learning session in September. The collaboratives are addressing the following clinical topics:

WHO partograph: With concerns over high rates of birth trauma, uterine rupture, and emergency cesarean section, we developed a change package on using the WHO partograph, including instructions, indicators, and algorithms on prevention and management of labor abnormalities. We are printing a year's supply of partographs with a supplemental medical record page covering management of the third stage of labor. Tambov and Yaroslavl have adopted the partograph and the change package oblast-wide, as have two Kostroma facilities. Mandatory partograph use was recently added to national regulations under development by the Kulakov Center, the leading technical authority on obstetric care in Russia. WHO Safe Motherhood practices, including the partograph, individual delivery rooms, skin-to-skin

contact, rooming-in, early discharge (three days after normal delivery; five days after cesarean section), and clean cord care practices were adopted in July 2009 by Minchurinsk Hospital No. 2 in Tambov.

Monitoring management of pregnancy: New financial incentives induce more Russian women to seek care during the first trimester, but in Yaroslavl these rates fell from 76% in 2006 to 67% in 2007, and nearly 20% of women in Kostroma and Tambov still waited until the second trimester in 2008. With our support, Kostroma is developing a system to monitor all pregnancies and ensure they have first visits before 12 weeks' gestation and receive essential care based on their risk level. This system derives from software developed by the Ivanovo Institute. Tambov is considering implementing this program, and Yaroslavl is developing a similar one.

Pre-term birth: The project was asked by leading national experts at the Kulakov Center to assist in implementing new national regulations designed to ensure that women in pre-term labor are transported for delivery to facilities equipped for neonatal intensive care. Kostroma is piloting an oblast-wide plan for uniform discharge and transport of such women at the project facilities of Sharya and Nerekhta district hospitals and the tertiary care center, the Oblast Clinical Hospital, which has introduced the use of glucocorticoids to prevent respiratory distress syndrome (RDS) among pre-term neonates. The project is developing a change package of algorithms for managing pre-term births based on nationally and internationally recommended guidelines.

Prevention of hypothermia and respiratory distress: Hypothermia increases the risk of RDS, a leading cause of early neonatal mortality in our target oblasts. In Kostroma, at Sharya Hospital, 10% of newborns developed hypothermia and 5% RDS; at Nerekhta Hospital, monthly incidence of hypothermia in 2009 ranged from 25%–69%. We developed a change package that includes hanging thermometers in delivery rooms, providing supplemental heat sources, monitoring newborns' vital signs, and skin-to-skin contact after birth. All 11 participating maternity hospitals in Yaroslavl and Kostroma and four in Tambov are implementing this package. Within a month, average delivery room air temperature rose from 21°C to 24°C at Nerekhta Hospital, toward a target of 25°C.

Primary care-level neonatal resuscitation: We were asked to prepare hospitals to implement a new, soon-to-be-required protocol for primary care-level neonatal resuscitation based on guidance of the American Academy of Pediatrics. A project audit found required medical assessment of newborns was completed in only 39% of births in Yaroslavl and 75% in Kostroma. We developed a change package on ensuring readiness of equipment, staff, and documentation in preparation for the new protocol, which is being implemented by 10 facilities in the three oblasts. Tambov Oblast Children's Hospital has adopted assessment of newborn stability according to the Downs scale and is leading rollout of this assessment tool to all oblast facilities.

Breastfeeding: Five maternity and children's hospitals in Kostroma and Tambov are improving support for breastfeeding in accordance with the UNICEF baby-friendly hospital model, with HCI providing expert training. After Nerekhta Hospital in Kostroma stopped using Metronidazole (contraindicated for breastfeeding) for antibiotic prophylaxis during cesarean sections, mean rates of exclusive breastfeeding on discharge increased this year from 59% in January–September to 87% in October.

Reproductive health: Analyses of epidemiologic and system data identified increasing unwanted pregnancies among teens and continued high levels of abortions as key issues needing improvement. In Kostroma, the number of second (or more) abortions among 15–17-year olds more than doubled from 28 in 2007 to 65 in 2008. High and growing rates of child abandonment at birth were also a concern, particularly in Kostroma. Audits of medical documentation found that few women visiting women's consultations in Yaroslavl and Nerekhta rayon in Kostroma received counseling on reproductive health or contraception. Measurements of contraceptive use and abortion rates were found unreliable. Ten facilities in Yaroslavl and Tambov began work to reduce abortions among women at high medical and social risk, and seven facilities in the three oblasts began improvement work to reduce abortion and

sexually transmitted infection (STI) rates among teens. Three facilities have planned to organize youth-friendly clinics on the UNICEF model. Yaroslavl facilities began developing a sex education curriculum for 10th graders. The Kostroma Family Planning Center's new counseling program for pregnant teens and young women seeking abortions led 18 of 45 (40%) women counseled to carry the pregnancy to term in August 2009, up from 22 of 218 (10%) in January–April, before the program started. The center has also started a program to identify high-risk teens and offer them free STI testing.

Directions for FY10

HCI will establish a working group of key national level experts and MOHSD representatives to facilitate review and adoption of the documentation on organization of HIV care decentralization, organization of social support services for HIV-infected women, and case management models developed through HCI and other USAID-supported activities. Through this participatory process, a set of documents will be finalized and adopted by MOHSD authorities for use nationwide. Similarly, HCI will work with the Federal TB/HIV Center to systematize documentation of the results and best practices from improvement collaboratives to develop standard processes for organizing screening of HIV patients for TB at the polyclinic level that can be used to introduce the practice in other Russian regions. In cooperation with the St. Petersburg's Committee on Social Policy, HCI will support implementation of a city-wide spread collaborative on improving social support services for HIV-infected mothers and children born to them. New changes packages on prevention of child abandonment and prevention and management of pre-term birth will be incorporated into the three oblast-wide MCH/RH collaboratives. HCI will implement a study to evaluate the effects of HIV care decentralization in St. Petersburg on coverage and quality of medical follow-up of HIV patients. The project web portal will be expanded to include a public QI knowledge management hub with an e-library on Russian-language materials on QI methods,

LATIN AMERICA AND THE CARIBBEAN

2.13 Bolivia

Overview of HCI's Program in FY09

What we are trying to accomplish	Geographic scale	Population coverage
Improve the quality and coverage of TB control activities by spreading QI methods and lessons learned during the demonstration phase of the TB DOTS collaborative to a larger population in the city of El Alto, La Paz Province	El Alto encompasses 5 health care networks having 95 facilities, including 3 hospitals, 43 health centers and 18 laboratories	Approximately 900,000 inhabitants
Increase detection of new TB patients	All 43 (100%) facilities in El Alto municipality are participating in the collaborative	Approximately 900 TB patients are expected in El Alto; currently, the MOH detects and treats only 400 (45% of expected) Current cure rates are at 74% and abandonment plus "unknown transfers" at 12% Cure rate among the "previously treated" cohort is only 58%
Increase TB cure rates and reduce abandonment rates		
Improve the quality of sputum samples and laboratory activities		

Main Activities and Results

Conclude the demonstration phase of the TB DOTS Collaborative in 16 municipalities and plan spread phase in new municipalities

HCI's work in Bolivia in FY09 followed on activities implemented in FY08 under the Quality Assurance Project, which worked with the USAID-funded bilateral project, *Gestión y Calidad en Salud* (GCS), and National TB Control Program to implement a demonstration TB Collaborative (33 QI teams, 114 facilities) aimed at improving TB case-finding and directly observed treatment in 16 selected, rural municipalities. Based on the results of that collaborative, USAID asked HCI and GCS to spread the demonstration phase improvements to 43 new facilities that make up five health networks operating in the city of El Alto and its rural surroundings in La Paz Province. We began planning the spread collaborative in the first quarter of FY09, including coordinating with the MOH's National TB Control Program and the Regional MOH office for El Alto.

HCI concluded the demonstration collaborative in FY09 and harvested lessons learned on how to improve TB control activities locally. The GCS team and HCI produced a synthesis document on the best practices the QI teams had developed, and HCI updated the MOH written distance learning materials and tested them with members of El Alto's three health network teams. Because El Alto's municipalities are urban, much of the learning from the demonstration phase had to be revised for application in these more densely population urban settings.

Organize the collaborative in El Alto to improve the coverage and quality of TB control activities

The first workshop to train facilitators from the five health network management teams was held in March 2009 and marked the official launch of this spread phase. We trained 30 facilitators from the MOH regional office and the five teams in TB program management and QI methods. These trainees will serve as facilitators, working closely with HCI to spread improvements to the new target facilities. They conducted a baseline assessment of TB activities at each participating facility. A record review was used to assess 12 indicators of the TB control program's performance for each health care network and facility. The baseline showed severe deficiencies in the TB program's main processes: basic drugs and supplies were lacking; less than 50% of expected respiratory suspects were effectively tested for TB; less than 50% of the expected new TB cases were effectively diagnosed; and 48% of sputum samples were unusable due to poor quality.

The first learning session, in April 2009, attracted 117 professionals from 34 facilities from four networks. The fifth network, Senkata, followed suit in May. Thirty-two QI teams were trained in basic concepts and tools for QI and the collaborative approach; reviewed the results of the baseline; identified process deficiencies; and devised rapid improvement cycles to be implemented in the first action period, during May–June.

During that action period, HCI and the local MOH office provided follow-up to QI teams' implementation of rapid improvement cycles. Approximately 60% could effectively implement their planned improvements, while the rest had difficulties, resulting in weak implementation of their improvement plans. Nevertheless, the results showed improvements in the indicators being monitored. One area with evidence of the problem is in the facility-level availability of TB drugs and supplies. It involved logistics processes, including drug requests to the MOH, storage, inventory, and keeping sufficient stock of TB drugs. Leveraging a successful USAID experience with an intervention called "DOTS boxes" (boxes labeled with each patient's name contain the patient's monthly drug supply), HCI and JSI consulted logistics experts, developed data collection forms to support progress tracking, and introduced the intervention in all facilities. As each new patient is identified, a new DOTS box is prepared.

HCI's senior QI advisor in Bolivia, Dr. Luisa Mendizabal, relocated to the MOH Regional Tuberculosis Control Program office at El Alto in June to enable daily contact with the Program.

The second learning session took place in July and included 58 participants who had not attended the prior learning session. The initial QI teams' system changes had been successful in increasing several of the indicators, including detection of more new pulmonary TB cases and reducing the percentage of unusable sputum samples. A surge in health center patients due to a new cash subsidy mechanism for poor families and the HINI flu pandemic cases barred some TB respiratory suspects from appointments and a small decline in case finding in the third quarter: 47% had been expected and 42% actualized. Sites made progress in reducing the percentage of unusable sputum samples: down from 48% of all samples in January–March 2009 to 36% in July-September.

In September 2009, HCI and the El Alto MOH TB Program organized a day-long workshop of TB patients and their families to promote treatment adherence and identification of new respiratory suspects among family members. Participants included 136 TB patients in treatment, 74 family members, and 40 MOH care providers. The workshop stimulated formation of an association of Al Alto TB patients.

Directions for FY10

Information, education, and communication activities using media and other mechanisms will start in the first quarter of FY10 as will activities to mobilize social organizations of El Alto to participate in TB control strategies. The 43 outpatient clinics of the Social Security System in El Alto will join the collaborative. The "DOTS boxes" strategy will be scaled up and evaluated.

2.14 Guatemala

Overview of HCI's Program in FY09

What we are trying to accomplish	Geographic scale	Population coverage
Reduce maternal and neonatal mortality by scaling up essential obstetric and newborn care best practices at the primary, secondary, and community levels (ProCONE collaboratives: basic, comprehensive, and community)	8 of the country's 29 health areas: a 9th was dropped due to political problems 160 of 571 MOH facilities in the 8 health areas 1,800 of 6,265 service providers in the 8 health areas	Health areas' population: 5.7 million Beneficiaries: 1.6 million
Improve quality of health service delivery and affect behavior change in municipalities participating in the Conditional Cash Transfer Program and document impact	9 of the 29 health areas 99 priority municipalities out of 130 in the CCTP	200,000 families
Implement a quality management assurance system in the MOH based on ISO:9001 certification requirements	MOH at the national level, San Marcos and Solola Health Area Directorates, and 5–10 pilot facilities in the San Marcos Health Area	

Main Activities and Results

HCI initiated a new program of assistance to the Guatemala MOH in FY09 with three main components. The first, which builds the lessons learned in a demonstration collaborative implemented in the San Marcos Health Area under the *Calidad en Salud* Project, seeks to scale up the ProCONE package of prenatal, delivery, postpartum, and newborn care across the community-to-facility continuum.

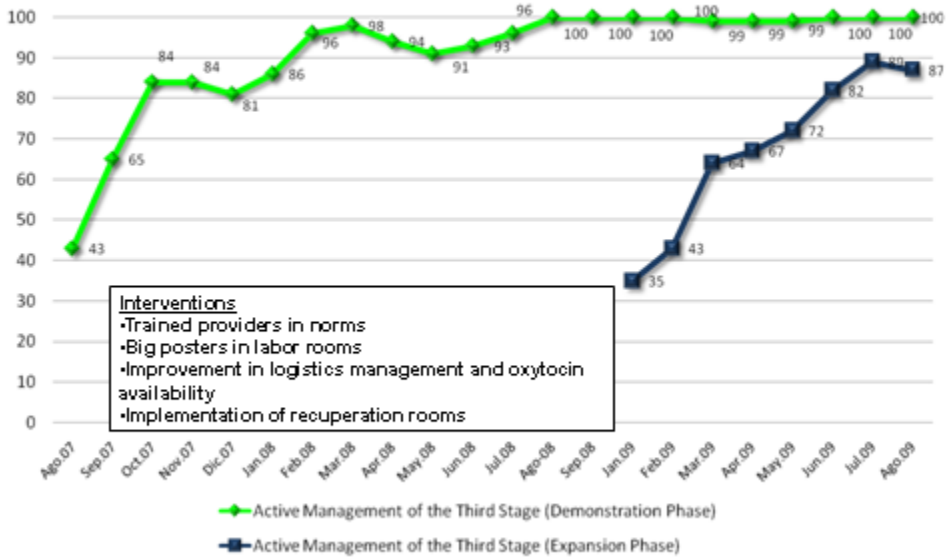
ProCONE involves three collaboratives: Basic ProCONE addresses prenatal, postpartum, and neonatal care at ambulatory facilities and use of the partograph and active management of the third stage of labor (AMTSL) during delivery services; Comprehensive ProCONE focuses on the management of obstetric and neonatal complications; and Community ProCONE focuses on improving pregnant women's knowledge of dangers signs, family and community preparation of emergency plans, traditional midwives' participation in referrals, and cultural adequacy of delivery services. The second component adds QI and behavior change communication (BCC) interventions in priority municipalities by the Government's Conditional Cash Transfer Program (CCTP), which provides a cash subsidy for poor families who meet minimum health service utilization levels. Under the third component, HCI is helping the MOH introduce a Quality Management Assurance System (QMAS) whose processes comply with ISO:9001, 2008 norms for human resources, finance, infrastructure, and logistics.

Scale up ProCONE interventions through collaboratives in eight health areas

HCI and the MOH expanded the basic ProCONE collaborative in San Marcos this year to include health posts and began a spread collaborative to introduce the intervention package to seven additional health areas. The best practices and obstacles from the San Marcos demonstration phase were also documented. Furthermore, at the community level, learning sessions and the documentation of best practices continued, and an expansion of the community collaborative has been proposed.

Activities implemented this year have paid off, and important improvements in compliance with criteria in key indicators have been reported, including: partograph, active management of the third stage of labor, routine newborn care in institutional deliveries, prenatal care, postnatal care, and follow-up newborn care. Figure 23 shows that the spread sites in seven new health areas have achieved rapid improvements in compliance with AMTSL standards since improvement activities began in 2009, while the original sites in San Marcos have maintained highly reliable levels for a year.

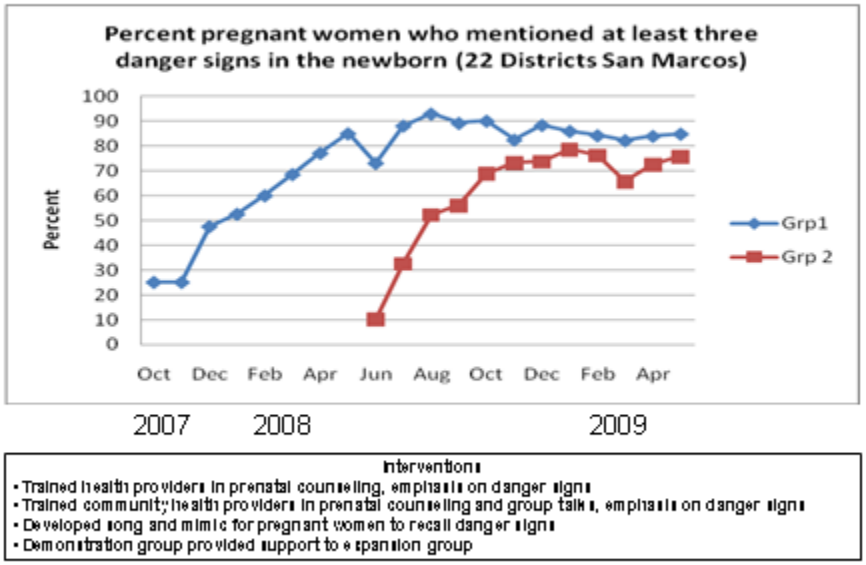
Figure 23: Guatemala: Trend in compliance with AMTSL criteria in five facilities in San Marcos (demonstration phase) and 65 facilities in seven SILAIS (expansion phase)



At the community level, learning sessions and the documentation of best practices continued in all 22 districts of San Marcos. The focus of activities during the year was to spread the interventions to increase birth preparedness which had been piloted in San Marcos' 11 highland districts to its 11 lowland districts. As shown in Figure 24, the second group of districts achieved solid gains in mothers' awareness of danger signs in the newborn in less time that had the first group of districts. Similar results were seen for awareness of danger signs in pregnancy and having an emergency birthing plan.

The H1N1 pandemic hampered progress on all Guatemalan collaboratives, curtailing field visits and postponing learning sessions. The first learning session of the obstetric and newborn complications collaborative (Complications ProCONE) was postponed several times due to H1N1 flu restrictions. Baseline assessments of compliance with standards for the management of obstetrical complications in the 16 hospitals were begun in September.

Figure 24. Guatemala: Progress in educating mothers about newborn danger signs in San Marcos Health Area



Group 1: 11 highland districts, **Group 2**; 11 lowland districts

Improve quality of service delivery and effect behavior change in targeted CCTP municipalities

During the year, HCI helped the MOH develop quality standards and indicators for the delivery of maternal, newborn, and child health services in facilities in the municipalities covered by the CCTP as well as for behavior change communication (BCC) activities linked to the program. We developed and produced BCC materials to support the Ministry's health educators in the 99 CCTP municipalities and directly trained 455 of the 745 health educators in interpersonal counseling, group talks, participatory sessions and home visits.

As part of our mandate from USAID to measure the CCTP's impact, we analyzed data improvement teams had collected in CCTP and non-CCTP municipalities to compare performance on indicators related to the delivery of preventive care. Between December 2008 and May 2009, CCTP facilities, which are located in municipalities with generally higher levels of poverty and had initial performance levels well below non-CCTP facilities, improved their performance to levels similar to those of non-CCTP facilities. In the third quarter of FY09, we carried out a knowledge and practices survey among women already receiving these payments and a comparison group of women who will receive them later. We will address weak areas that the analysis identified—minimal nutritional counseling, poor understanding of complimentary feeding, and low use of family planning—through CCTP interventions in FY10.

Prepare MOH management support systems and maternal-newborn service delivery for ISO:9001 certification

HCI completed the design phase of implementation of the Quality Management Assurance System this year. The QMAS is intended to enable the Ministry of Health's administrative and financial management processes (i.e., procurement, warehousing, inventory control, budget execution, human resources) as well as prenatal, delivery, postpartum, neonatal, and child care service delivery to comply with ISO:9001, 2008 certification requirements for quality management. Following baseline assessments, we designed

key processes and developed corresponding procedures manuals for 38 administrative and financial processes (grouped in nine administrative and financial modules) within the national Extension of Coverage Program. We then trained 150 MOH staff from the central level and all 84 administrative units within the MOH in the new procedures; these personnel will serve as "change agents" to help co-workers implement the new procedures. The project provided technical assistance for the development of the MOH´s web site, officially launched during the year and serving as a platform for communicating the new procedures.

Ministry of Health staff in the Solola and San Marco Health Area Directorates also participated in the rollout of the new procedures to pilot their implementation at the area level. We worked with managers to measure performance on three indicators: purchasing, budget execution, and handling client complaints. We validated nine maternal and neonatal procedures in San Marcos that had been developed to comply with ISO:9001, 2008 and developed job descriptions for 85 area positions.

URC hired a Mexican consulting firm—INSAD, which has ISO certification experience—to review the QMAS design and implementation and make recommendations to strengthen them. The firm reported that the HCI team is applying the ISO model well and recommended adding indicators on patient safety, processes to ensure a safe environment, and more quantitative indicators of efficiency.

In August, the MOH issued an order that officially incorporates the nine sets of administrative and financial management procedures we had developed into the operations of all 84 MOH administrative units. The Ministry also created a unit to handle citizen concerns and complaints. We trained 25 internal MOH auditors who will become part of the team that will institutionalize the QAMS.

Directions for FY10

HCI and the MOH will launch the comprehensive ProCONE collaborative as well as a new family planning collaborative; family planning and nutrition indicators will be added to the existing basic and community ProCONE collaboratives. We will also implement new research studies to strengthen the application of CQI methods to community-level services, evaluate QI's contribution to achievement of CCTP objectives, strengthen QI team performance, and document the updating of best practices in a collaborative's spread phases. The project will also seek ISO certification of clinical care processes in 5–10 MOH facilities.

2.15 Honduras

Overview of HCI's Program in FY09

What we are trying to accomplish	Geographic scale	Population coverage
Assure the quality of essential obstetric and newborn care (EONC), child health, and family planning services through institutionalization of continuous quality improvement (CQI)	166 health facilities out of 904 in 11 health regions out of 20 ▪ 15 hospitals (out of 28 in the country) ▪ 26 maternal clinics (out of 40 in the country) ▪ 125 health centers (out of 836 in the country)	3.7 million of a total population of 6.6 million
Strengthen external quality assurance within the health sector reform process of the Secretariat of Health (SSH)	Assisted facilities and decentralized provider networks are located in 13 of the country's 20 health regions	

Main Activities and Results

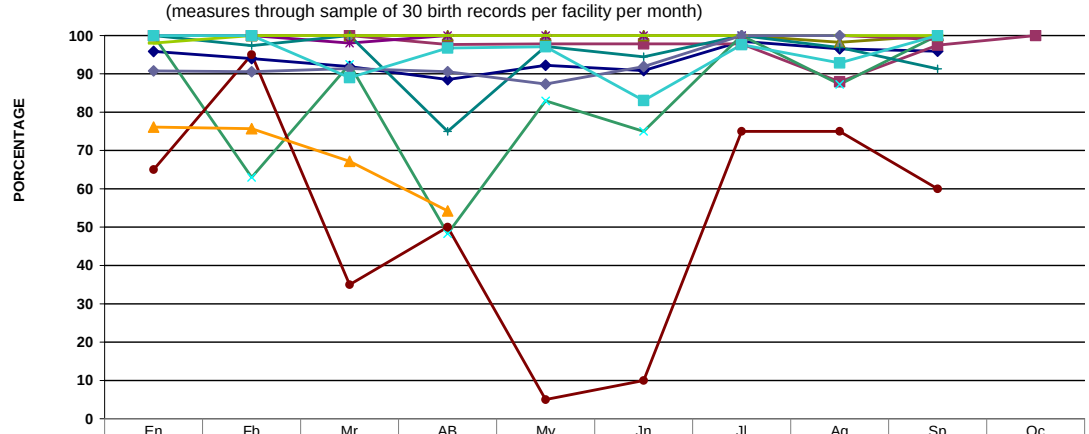
Implement CQI for essential obstetric and newborn care in 11 health regions

HCI continued this year to support 166 health facilities in 11 of the country's 20 health regions to implement continuous quality improvement for maternal, newborn, and child health services and work with individual regions to support implementation of more narrowly focused regional improvement collaboratives. HCI assistance in the area of maternal and newborn care contributed to the implementation of the Secretariat of Health's (SSH) Plan for the Accelerated Reduction of Maternal and Infant Mortality (RAMNI), which emphasizes improvements in the management of hemorrhage and other obstetrical complications. We participated in the revision of the SSH maternal/newborn care standards and clinical guidelines, which incorporated measurement of blood loss in cases of postpartum hemorrhage; use of hydrostatic balloon to stop bleeding at the ambulatory level during patient referral; and the concept of "the Golden Hour," the critical period when providers must make life-and-death decisions.

HCI supported facilities in the 11 regions in implementing the SSH's new, stricter AMTSL standard, which took effect in January 2009 and requires facilities to monitor compliance with all three elements of AMTSL (administration of Oxytocin, controlled cord traction, and uterine massage). The latter two criteria had not been routinely assessed in prior years. Figure 25 shows that compliance with the stricter AMTSL standard fell initially in comparison to compliance with the less strict standard in force previously, but has steadily improved over the year in most of the 11 regions. Some hospitals and maternal clinics from the six CQI expansion regions (the last six listed in the data table below the figure) have not yet been trained in all aspects of AMTSL.

Figure 25. Honduras: % of vaginal deliveries in which all three elements of AMTSL were applied, 11 Health Regions, January-September 2009

(measures through sample of 30 birth records per facility per month)



	En	Fb	Mr	AB	My	Jn	Jl	Ag	Sp	Oc
% Global	96	94	92	88	92	91	98	97	96	
1.- :Comayagua:	100	100	100	98	98	98	98	88	98	100
2.-Copan:	100	100	100	100	100	100	100	98	100	
3.-Colón:	100	63	92	48	83	75	100	87	100	
4.-La Paz:	100	100	98	100	100	100	100			
5.-Santa Barbara:	65	95	35	50	5	10	75	75	60	
6.-Intibucá:	100	97	100	75	97	94	100	97	91	
7.-Lempira:	100	100	100	100	100	100	100	100	99	
8.-Atlantida:	98	100	100	100	100	100	100	100	100	
9.-Yoro:	91	91	91	91	87	92	100	100		
10.-El Paraíso:	100	100	89	97	97	83	98	93	100	
11.-Olancho:	76	76	67	54						

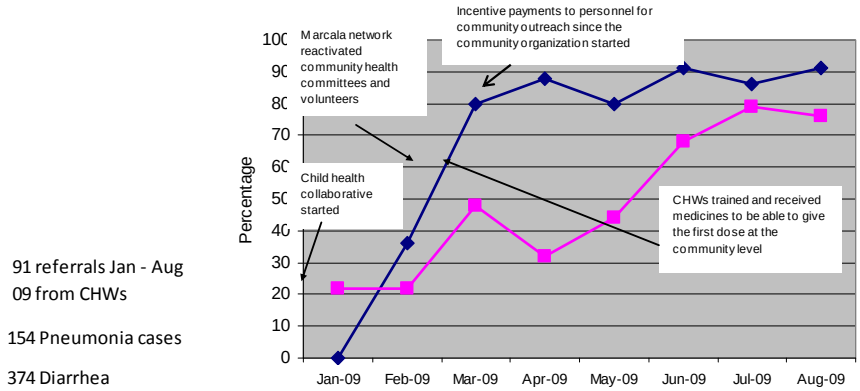
HCI provided support to the Comayagua Region in its efforts to improve referral and counter-referral processes between the Sta. Teresa regional hospital and the region's five maternal health clinics. We

also trained trainers for the new EONC training center in Tocoa Hospital in the Colon Region. This center will train providers from the three northern health regions: Atlantida, Gracias a Dios, and Colon. We also assisted with an impact evaluation of the training conducted in the regional EONC training centers.

Improve case management of pneumonia and diarrhea in children under five in La Paz Region

HCI assisted the La Paz Health Region to implement a collaborative addressing case management of pneumonia and diarrhea in children under five years old. This collaborative includes one hospital, one maternal child clinic, and 25 health centers organized into nine health care networks. We assisted the region to carry out three learning sessions during 2009, during which time the participating facilities demonstrated solid gains in compliance with case management standards. The mean percentage of cases of pneumonia managed according to standards at the facility level rose from 57% in January 2009 to 86% in April. One network, Marcala, received particular HCI support because half the 2008 deaths among children under five in La Paz had occurred in that network.

Figure 26. Honduras: Introduction of community case management in Marcala network, La Paz Region, January-August 2009



91 referrals Jan - Aug 09 from CHWs

154 Pneumonia cases

374 Diarrhea

	Jan-09	Feb-09	Mar-09	Apr-09	May-09	Jun-09	Jul-09	Aug-09
Percentage of children under five with diarrhea or pneumonia who were referred from the community level to Marcala health facilities that received their first dose of treatment at the community level	0	36	80	88	80	91	86	91
Percentage of children under five diagnosed with pneumonia or diarrhea in Health Region of La Paz health facilities who received follow up care within 48 hours	22	22	48	32	44	68	79	76

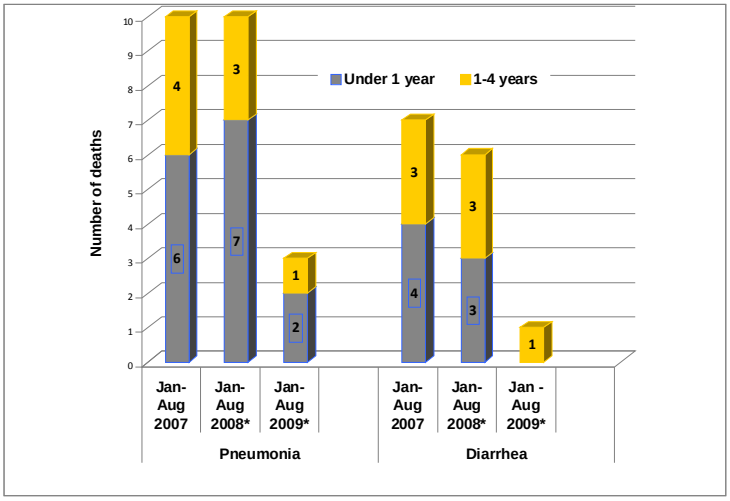
As part of improvements spurred by the collaborative, Marcala reactivated community health committees, trained community volunteers to provide loading doses of pneumonia and diarrhea treatment, and streamlined processes to prioritize ill children referred by community health workers. Figure 26 shows that the proportion of Marcala child pneumonia and diarrhea cases that received the initial dose of treatment in the community increased sharply over six months, as did provision of follow-up care by health facilities within 48 hours of initial consultation. These changes appear to have made a dramatic difference in the number of child deaths from pneumonia and diarrhea: Deaths from pneumonia fell 70% from 2007 and 2008 to the same period in 2009; deaths from diarrhea dropped from six during January–August 2008 to only one in that period in 2009 (Figure 27). Marcala health workers report being motivated by these reductions in child mortality to continue to strengthen their community work.

Implement new health sector management models with a focus on quality

HCI continued to provide technical assistance to hospitals and maternal clinics that have signed management agreements with the Secretariat to review quality gaps and identify actions to improve performance on quality indicators, as well as to assist with the quarterly monitoring of quality indicators linked to the management agreements. HCI began a new activity with the Quality Assurance Department and the Modernization Unit of SSH to design a national Quality Policy and Quality System

for the SSH. These products will link to other strategic documents of the health sector reform process, including a new Care Model, a management model, and a decentralization plan. This activity is on hold due to the political crisis.

Figure 27. Honduras: Child deaths from pneumonia and diarrhea in Marcala network, January–August, 2007–2009



Directions for FY10

HCI will continue to support the Secretariat of Health in the process of institutionalizing CQI approaches and tools applied to EONC and family planning services. We will provide technical assistance to teams in all 11 health regions to use the HCI-developed QI documentation tools. Learning from the regional pneumonia and diarrhea case management collaborative in La Paz will be documented and synthesized prior to its spread to the Copan Health Region. We will support the SSH in strengthening its external quality assurance processes and will work with the decentralized provider MANCORSARIC to develop its Quality Assurance Plan. We will also support the design of a new quality policy and national quality system for the SSH. New research studies will be carried out to document the institutionalization of CQI processes and evaluate quality indicators in regions that have and have not participated in CQI.

2.16 Nicaragua

Overview of HCI's Program in FY09

What we are trying to accomplish	Geographic scale	Population coverage
Reduce maternal and newborn mortality through the spread of improved care practices; reduce case fatality rates for newborn asphyxia, sepsis, and respiratory distress	9 hospitals and 30 health centers in 9 out of 17 SILAIS (local health areas) and 8 private clinics affiliated with Social Security. Participating public hospitals: Chinandega, Leon, Matagalpa, Jinotega, Chontales, Boaco, Nueva Segovia, RAAS, RAAN	90,466 expected pregnancies 31,334 newborns at risk of complications
Improve HIV voluntary counseling and testing (VCT) for persons with sexually transmitted infections (STIs)	68 out of 121 health centers in 12 SILAIS Participating SILAIS: Granada, Carazo, Masaya, Nueva Segovia, Chinandega, RAAN, Rio San Juan, Chontales, Jinotega, Matagalpa, Estelí, and Madriz	Catchment population: 1.6 million 20,000 people with STI (assuming 12.5 per 1,000)
Improve quality of care for HIV-positive patients	14 hospitals and 2 health centers in 11 SILAIS Participating SILAIS: Chinandega, Leon, RAAS, RAAN, Masaya, Granada, Rivas, Jinotega, Nueva Segovia, Madriz, Esteli, Carazo, and Rio San Juan	769 HIV-positive patients 477 on ART

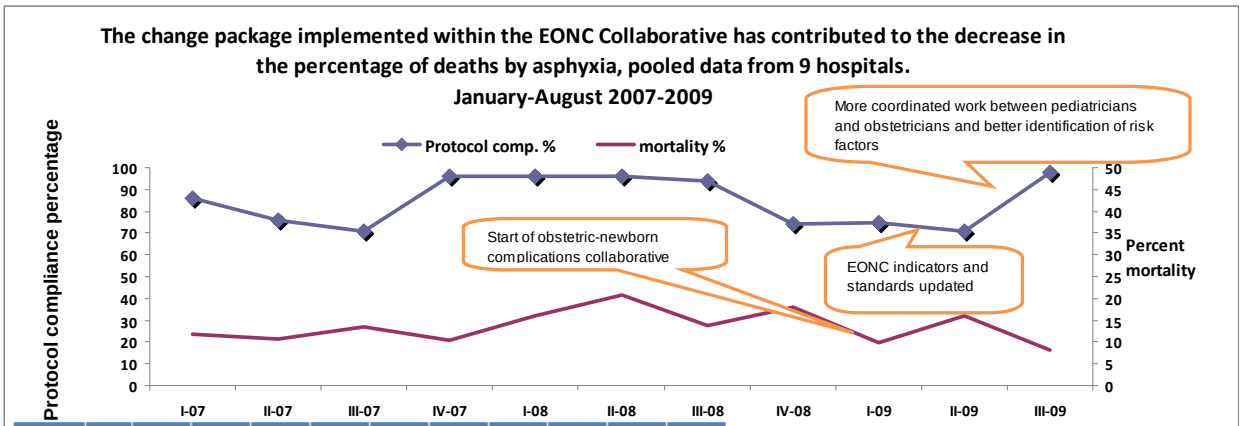
What we are trying to accomplish	Geographic scale	Population coverage
Reinforce quality family planning counseling to ensure that clients are able to choose and receive the method of their choice and strengthen post-obstetric event contraception at hospitals nationwide	80 health facilities in 13 SILAIS Participating SILAIS: Madriz, Nueva Segovia, Masaya, Rio San Juan, Matagalpa, RAAS, RAAN, Jinotega, Carazo, Chontales, Esteli, Rivas, and Chinandega	613,706 population of reproductive age served by these 80 facilities
Prevent infections in newborns through the use of alcohol gel for hand hygiene	29 health facilities in all 17 SILAIS (21 hospitals, 2 private medical clinics affiliated with Social Security, and 6 health centers	31,334 newborns

Main Activities and Results

Improve quality of essential obstetric and newborn care

HCI technical assistance to improve EONC in Nicaragua focused this year on a new obstetrical and newborn complications collaborative, begun in January 2009 with nine hospitals in nine SILAIS and later expanding to add 29 health centers from the same SILAIS. The collaborative focuses on improving management of maternal complications as well as care for moderate and severe asphyxia, sepsis, and respiratory distress in newborns. The collaborative's design, to bring obstetricians and pediatricians together to jointly analyze causes of morbidity and mortality, has helped to increase coordination of care and hand-offs between these specialists. Other elements of the implementation package of this collaborative include staff refresher training on the identification and recording of maternal risk factors and on labor monitoring using the partograph; assigning more qualified personnel to perform labor monitoring; closer monitoring of pregnant women admitted to maternity homes; and acquisition of basic newborn resuscitation equipment. Figure 28 shows that these hospitals have reduced the proportion of deaths from asphyxia.

Figure 28. Nicaragua: Compliance with case management for newborn asphyxia and case fatality, nine hospitals, January 2007-September 2009



Asfixia	I-07	II-07	III-07	IV-07	I-08	II-08	III-08	IV-08	I-09	II-09	III-09
E	94	123	104	124	87	86	72	67	71	69	37
F	11	13	14	13	14	18	10	12	7	11	3
%	11.7	10.6	13.5	10.5	16.1	20.9	13.9	17.9	9.9	15.9	8.1

E: Egreso F: Fallecidos %: Porcentaje mortalidad

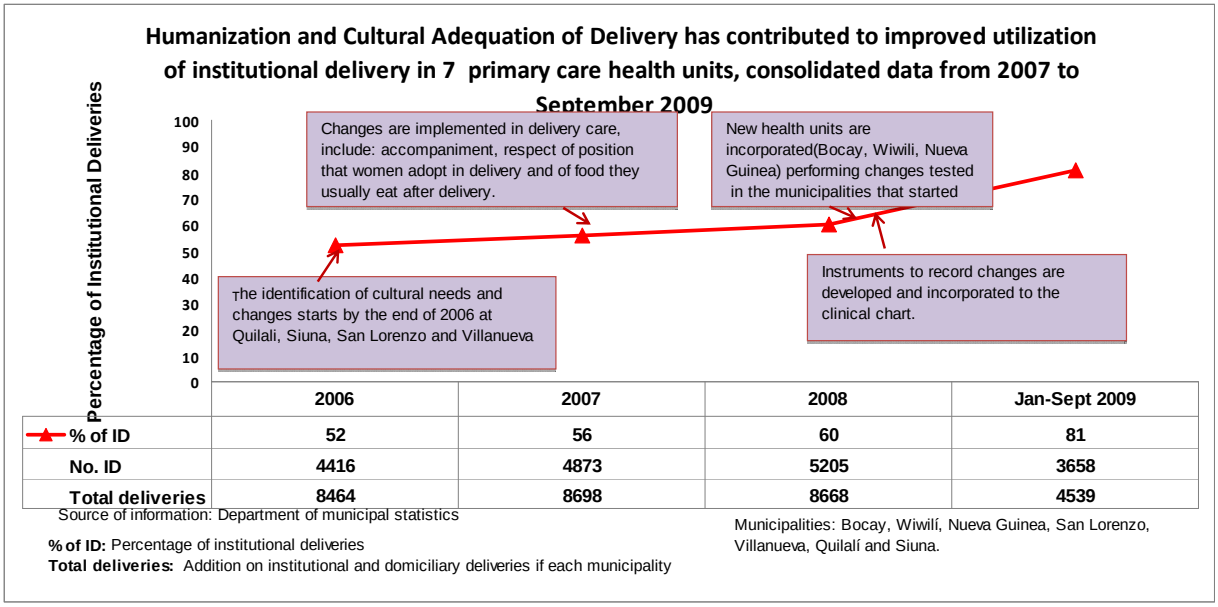
Sources: Statistics departments from MINSA hospitals in RAAN, RAAS, Nueva Segovia, Chinandega, Juigalpa, Boaco, Matagalpa, Jinotega, Masaya.

Numerator: number of deaths by asphyxia cases;
Denominator: Total asphyxia discharges
Sample selection: simple random 20 files a month per hospital

As occurred in Honduras, Nicaragua's MOH issued an order in 2009 that facilities must perform and record all three AMTSL elements. HCI assisted teams in the EONC complications collaborative to comply with the new MOH order and document the performance of cord clamping, controlled cord traction, and uterine massage, in addition to administration of Oxytocin. We also helped the MOH central level update its hospital guide for Integrated Management of Childhood Illness (IMCI) and standards for management of obstetrical complications during the prenatal period and delivery.

HCI continued assistance to health centers in 16 municipalities in nine SILAIS to implement cultural adaptation of childbirth services to make facility-based delivery more culturally acceptable to women who traditionally prefer home delivery. These facilities have documented increases in skilled attendance at birth and reductions in maternal deaths during the period when delivery services were made more culturally acceptable to women and families by allowing family members and community midwives to attend delivery and choice of delivery position. Figure 29 shows how such changes have contributed to a rise in institutional delivery in seven health facilities, from 52% of local births in 2006 to 81% in the first nine months of 2009.

Figure 29. Nicaragua: Cultural adaptation and institutional delivery, seven primary health care facilities, 2006-2009



	2006	2007	2008	Jan-Sept 2009
% of ID	52	56	60	81
No. ID	4416	4873	5205	3658
Total deliveries	8464	8698	8668	4539

Source of information: Department of municipal statistics

Municipalities: Bocay, Wiwilí, Nueva Guinea, San Lorenzo, Villanueva, Quilalí and Siuna.

% of ID: Percentage of institutional deliveries
Total deliveries: Addition on institutional and domiciliary deliveries if each municipality

Promote quality counseling and testing for HIV and improved care and treatment for persons living with HIV

Another large component of HCI technical assistance in FY09 was to support the MOH in promoting voluntary HIV counseling and testing for pregnant women and patients with sexually transmitted infections (STIs). Continued efforts to strengthen and decentralize the diagnostic network have enabled MOH facilities to perform HIV tests on over 7,000 people per month, of whom about half are pregnant. HIV counseling to people with STI has increased from 17% (May 2008) to 55% (August 2009); HIV diagnoses among this group rose from 10% to 34%. This increase was due to more active promotion of HIV testing by health facility staff, who now recognize STI patients as having a higher risk of HIV. HCI has also facilitated better referral linkages between NGOs and MOH facilities in SILAIS with the highest HIV rates.

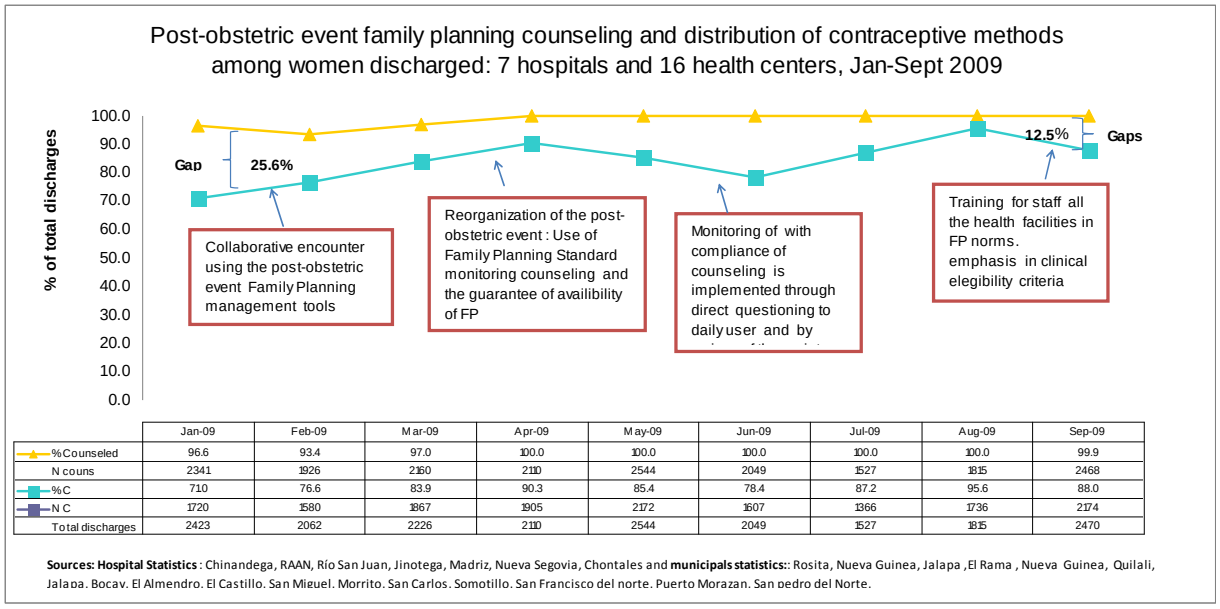
HCI began a new collaborative in January 2009 to improve comprehensive care of HIV patients and introduce changes to improve retention of patients in the ART program, their clinical status,

documentation of care in the clinical record, and coordination with counseling and testing services. The ART collaborative now engages 14 hospitals and two health centers in 11 SILAIS. Entry into ART has risen in Nicaragua from 744 people in 2008 to 892 in 2009, while compliance with clinical protocols for these patients has also improved. The collaborative has made some progress in maintaining good clinical outcomes among those who remain in care by ensuring comprehensive care (by including nutritional counseling and psychosocial support), but further work must reduce the retention gap—keeping patients who start ART in care. Changes by collaborative sites to address this need include increasing communication between primary and secondary care levels on newly diagnosed patients, connecting newly diagnosed patients with PLWHA support groups, and more frequent assessment of adherence and side effects on patients newly starting ART. HCI has worked with health facility staff to reduce stigma and discrimination toward HIV patients and to strengthen PLWHA self-help groups to increase adherence. Involving people with HIV and their family members in these groups has contributed to better adherence.

Improve quality of family planning counseling

HCI provided technical assistance to strengthen family planning services through: mentoring visits to support management teams; support for national training on quality family planning counseling, WHO medical eligibility criteria, and contraceptive technology updates; reorganization of the process for tubal ligation; and printing and distributing counseling and educational materials to facilitate promotion of a broader choice of and greater consistency in the delivery of contraceptive methods. We worked with 23 sites to improve post-obstetric event family planning counseling; these sites increased the proportion of women who received the contraceptive method of their choice and increased the proportion of women discharged after delivery with a contraceptive method from 71% in January 2009 to 85% in September (Figure 30). This increase was largely due to re-organization of family planning service delivery, monitoring of compliance with counseling standards, improved application of eligibility criteria to ensure informed choice, expanded method choices, identifying clients with reproductive risk, and providing better follow-up care to family planning users.

Figure 30. Nicaragua: Gap between women who do and do not receive quality family planning counseling post-obstetric event, seven hospitals and 16 health centers, January–September 2009



	Jan-09	Feb-09	Mar-09	Apr-09	May-09	Jun-09	Jul-09	Aug-09	Sep-09
%Counseled	96.6	93.4	97.0	100.0	100.0	100.0	100.0	100.0	99.9
N couns	2341	1926	2160	2110	2544	2049	1527	1815	2468
%C	71.0	76.6	83.9	90.3	85.4	78.4	87.2	95.6	88.0
N C	1720	1580	1867	1905	2172	1607	1366	1736	2174
Total discharges	2423	2062	2226	2110	2544	2049	1527	1815	2470

Sources: Hospital Statistics : Chinandega, RAAN, Río San Juan, Jinotega, Madriz, Nueva Segovia, Chontales and **municipals statistics**:: Rosita, Nueva Guinea, Jalapa ,El Rama , Nueva Guinea, Quilali, Jalapa. Bocay. El Almendro. El Castillo. San Miguel. Morrito. San Carlos. Somotillo. San Francisco del norte. Puerto Morazan. San pedro del Norte.

Prevent infections in newborn through improved hand hygiene

HCI supported expansion of surveillance of the rational use of antiseptics and disinfectants and hand hygiene in 17 hospitals and 22 primary care health units in all 17 SILAIS. We supported the Ministry in organizing surveillance of catheter-associated blood stream infections in the neonatal intensive care wards and pediatrics intensive care units in four hospitals and the introduction of a new change package to prevent mechanical ventilator-associated pneumonia in four hospitals. The two national reference hospitals for children have brought down the incidence of pneumonia associated with mechanical ventilators: Bertha Calderon Maternal Hospital reduced its rate from 53 cases per 1000 ventilator days in October to 22 in September 2009; in the same period, Manuel de Jesus Rivera Hospital brought its rate down from 23 to 10 by improving compliance with protocols related to the correct use of disinfectants and antiseptics and improved hand hygiene.

Directions for FY10

The EONC Complications Collaborative will be expanded to include health centers in priority municipalities identified by the MOH, and HCI will continue support to the Ministry's family planning program to monitor and improve compliance with quality standards. We will document facilities' experiences that have made institutional delivery services more culturally acceptable. New work will begin to develop community and facility activities to reduce teenage pregnancy and to improve diagnosis and management of TB-HIV co-infection. We will begin helping health centers and the two national referral hospitals in Managua improve PMTCT activities. The ART Collaborative's third learning session will be held in the first quarter of FY10.

3 USAID Global Health Elements

3.1 Maternal, Newborn, and Child Health

Overview of HCI's Program in FY09

What we are trying to accomplish	Geographic scale	Population coverage
Provide global leadership: Promote the use of QI methods in USAID maternal and child health (MCH) priority countries to implement and scale up high-impact maternal, newborn, and child health (MNCH) interventions and delivery approaches for improved outcomes	Develop and test the Save Childbirth Checklist in collaboration with the WHO Patient Safety Working Group Apply QI models to strengthen links between maternal and reproductive health services in collaboration with the WHO Child and Adolescent Health unit Lead coordination for QI among USAID MCH partners	
Develop and support country programs (core funds): Help reduce maternal and newborn morbidity and mortality by implementing QI methods in selected countries	Mali: 2 districts (Kayes and Diema) of 7 in the Kayes Region and of 49 in the country; 1 of 8 regions in the country Senegal and Uganda: Investigate the potential of supporting USAID Missions in reducing maternal and newborn mortality	In the 2 Mali districts: 577,606 population
Support other country programs (field support funds)	Afghanistan: 2 districts in each of 3 provinces (Kabul, Kunduz, Balkh)	500,000 population
Conduct operations research on the application of QI interventions to overcome priority MNCH challenges	Afghanistan: Take baseline measurement of MNCH indicators Afghanistan and Mali: Investigate effectiveness of QI models at the community level and QI's cost-effectiveness Guatemala: Research the impact of QI on the capacity of the conditional cash transfer program to meet the objective of increasing access to quality care	
Support testing of the CHW program functionality assessment tool: Test tool to assess and improve effectiveness of CHW programs in selected countries	Measure community health worker program functionality: Field tested in FY09 in Nepal with two CHW programs	

Main Activities and Results

Provide global technical leadership in maternal, newborn, and child health

Supported the development of a Safe Childbirth Checklist led by WHO's Patient Safety Alliance: Our MNCH experts participated in the Working Group and International Consultation of the World Alliance for Patient Safety, Safe Childbirth Checklist, in Geneva, Switzerland, July 8–9, 2009. Inspired by the success of the WHO Safe General Surgery Checklist, which had reduced post-operative mortality and morbidity, the consultation developed a draft Safe Childbirth Checklist for facility-level use. Subsequently, HCI participated in a series of smaller WHO-sponsored expert meetings and will participate in field testing of the near-final draft checklist in FY10. Preliminary field testing will be followed by a formal, multi-country evaluation of a revised checklist to assess its impact on maternal and newborn outcomes. The evaluation will be led by investigators from the Alliance and the Harvard School of Public Health.

Led collaboration of USAID QI MNCH partners: HCI participated in meetings to coordinate MNCH QI work among USAID partners, culminating in an HCI-led USAID QI Partners Meeting, held at URC on September 15, 2009. The meeting included USAID staff and representatives from Jhpiego, the Maternal and Child Health Integrated Program (MCHIP), Save the Children, John Snow Inc. (JSI), BASICS Immunization, BASICS, EngenderHealth, and URC. The meeting was intended to develop a strategy to improve coordination between different QI programs in MNCH. In preparation, HCI summarized and analyzed different QI models being applied in USAID-supported MNCH programs and developed a matrix identifying the key common elements in any effective QI model. Participants reviewed the matrix, suggested changes, and agreed to develop a joint paper that would include a common definition and elements of QI. HCI led the drafting of the paper; it will be produced jointly with USAID and its QI partners' endorsement. Meeting participants also conducted a mapping exercise to identify country programs where more than one partner is having or planning MNCH QI programs. The exercise identified countries with overlapping QI programs and urgently needing coordination.

Technical collaboration and participation: HCI MNCH staff participated in and presented at several technical meetings, including: 1) a WHO-organized workshop in Geneva in October 2008 to review experiences with training in IMCI and make recommendations to reduce the classroom time; 2) a neonatal resuscitation meeting led by Save the Children/BASICS and USAID in March 2009; 3) the April 2009 technical working group meeting sponsored by the Prevention of Post-partum Hemorrhage Initiative (POPPHI); and 4) an MCHIP-led expert consultation on pre-eclampsia and eclampsia. We also made several presentations to USAID staff and partners on HCI methods and results and at several international meetings, including a Latin American regional meeting in Lima in September 2009 on advancing newborn health.

Develop and support country programs

Mali: With core MCH funds, HCI started a program in Keyes Province, Mali, to introduce the improvement collaborative model to strengthen high-impact, evidence-based maternal/newborn health services at the facility and community levels in two districts. An initial set of program objectives has been finalized with the MOH. The facility baseline assessment will be conducted in October and November 2009. Emphasis will be on building provincial and district staff capacity to support ongoing QI processes to improve maternal newborn services. Experienced staff from HCI Niger and headquarters will support the Mali program, ensuring close collaboration with the MOH and partners.

Uganda: HCI has obtained approval from the USAID MCH Division and the USAID Mission to start a program to strengthen essential newborn health services in two Ugandan districts. The program may be expanded to include other interventions, such as maternal health and the integration of PMTCT and

ANC services. Neonatal resuscitation may be added to the essential newborn care package. Operations research to assess an early resuscitation implementation program may also be included.

Senegal: HCI has prepared, jointly with ChildFund, a concept paper for USAID Senegal to improve the quality of MNCH services and contribute to building the capacity of Senegalese counterparts in QI. An initial joint assessment visit is planned in Senegal in early 2010.

Afghanistan: HCI's Senior Advisor for MNCH is assisting the project's field support-funded program in Afghanistan in three priority areas: 1) developing a national QI strategy, including QI capacity building of senior public health staff at national and provincial levels, 2) designing and implementating maternal/ newborn improvement collaboratives to strengthen high-impact maternal/newborn services at the facility and community levels in the northern Kunduz and Balkh provinces, and 3) launching a Kabul Maternity Hospital improvement collaborative that will apply QI methods to improve cesarean section safety and outcomes in selected public and private hospitals in Kabul.

Technical coordination and support for other HCI field programs in MNCH: HCI's headquarters MNCH team continued to provide support as needed to field-supported MNCH programs in Honduras, Nicaragua, Guatemala, and Russia in FY09, including national scale-up of prevention of post-partum hemorrhage (PPH), improved antenatal care, and improved case management of maternal newborn complications (PPH, pre-eclampsia, and eclampsia, asphyxia, sepsis, and obstructed labor).

Conduct operations research

Benin: Operations research completed in FY09 examined task shifting and the use of counseling job aids for antenatal and post-partum counseling in Benin public maternity facilities. The pre-post intervention trial evaluated the quality and impact of maternal and newborn care counseling by skilled and unskilled health care workers in 14 government facilities in Zou/Collines. Results indicated that the quality of counseling by nurse-midwives and mothers' knowledge—particularly related to birth preparedness, danger sign recognition, newborn care, and home practices—improved significantly following the introduction of a job aid-based intervention. Task-shifting to lay nurse aides resulted in similar improvements in counseling with significantly higher levels of maternal knowledge. The job aids were found to be acceptable and consistent with existing practices, and deleging tasks to the less-skilled cadre was shown to improve care. Results have been fed back to local project and facility staff, and the job aids and task shifting have been replicated in 32 more sites so far. Two articles for publication have been drafted and are in technical review.

Afghanistan: HCI's headquarters MNCH team assisted in the preparation and analysis of a baseline assessment of facility-based maternal newborn services and household maternal newborn care practices and knowledge in Kunduz and Balkh provinces. Results of the facility survey have informed early implementation of the facility maternal/newborn collaborative. We have nearly completed the design of a baseline survey on CHW performance; results of the household survey and CHW assessment will guide implementation of maternal/newborn collaborative activities at the community level in FY 10.

Ecuador: HCI finished a study this year that developed and tested several interventions in rural, government health facilities to culturally adapt delivery services, thus increasing the indigenous populations' acceptance of facility birthing. Developing these interventions involved collaboration among facility staff, traditional birth attendants, users, and local government officials to identify changes that could make delivery services more acceptable to indigenous women and families. Results show that the approach was successful in increasing user satisfaction, varying by the type of change introduced. Data also suggest moderate increases in the use of hospitals for delivery care and reductions in home deliveries.

Support testing of the CHW program functionality assessment tool

In response to USAID's congressional mandate to increase the number of community health workers in USAID MCH priority countries, HCI developed and tested a tool to count functional CHWs and to improve overall program functionality in those countries. In collaboration with USAID, the first field test of the assessment tool was conducted in Nepal in May 2009 with JSI and the Nepal Family Health Program. Participating were two districts and two cadres of health workers: the Female Community Health Volunteers and the Maternal Child Health Workers. While both programs were rated as functional, the testing process identified several improvement steps. The tool was well received and will be tested in Benin in 2010. (Human Resources, section 4.2, has further discussion of this activity.)

Directions for FY10

HCI will continue to provide global leadership in developing strategies and tools for applying QI models to accelerate the achievement of Millennium Development Goals 4 and 5. We will emphasize applying in several countries (i.e., Afghanistan, Mali, Uganda, and Senegal) a QI model that explicitly strengthens a continuum of high-quality MNCH care from the community to the health facility level, including linkages between the two. In addition, HCI will complete and disseminate strategic papers on the role of QI in enhancing the effectiveness and spread of evidence-based MNCH interventions. We will also conduct research on the cost-effectiveness of QI models for improving MNCH outcomes and the application of QI models at the community level.

3.2 HIV/AIDS

Overview of HCI's Program in FY09

Activity	What we are trying to accomplish
ART Framework	▪ Improve the quality—with regard to coverage, retention, and patient wellness—of ART programs in sample sites in Nicaragua, Tanzania, and Uganda ▪ Identify operational changes that improve the quality of such care to develop a "change package" for dissemination and adaptation/replication
Global Fund: Quality of Services Toolkit	▪ Provide project coordination and technical assistance to the Global Fund and OGAC to develop a Quality of Services Toolkit to monitor the quality of HIV, TB, and malaria services
Laboratory improvement	▪ Improve HIV testing and monitoring capabilities in HCI-participating laboratories by improving lab processes affecting testing outcomes ▪ Create a culture of continuous quality improvement and consistent documentation in HCI-participating labs ▪ Expand lab improvement programs into new HCI countries
HIV Assessment Toolkit	▪ Develop a toolkit for assessing HIV programs
HIV Training Evaluation	▪ Evaluate HIV training programs in three countries, including assessing provider knowledge and competence after training
Human Resources Improvement Collaborative in Niger	▪ Apply QI methods to the improvement of human resources (HR) for health ▪ Improve the productivity (efficiency/effectiveness) of health workers ▪ Improve engagement and retention of health workers

	▪ Improve HR management capacity of MOH district and regional management teams by applying best practices in HR management ▪ Apply the lessons learned from year one of the HR Collaborative to other regions and at the national level

Main Activities and Results

Develop a framework for ART

HCI advanced the development and field implementation of the Framework to Improve Care for Patients on ART, a tool to facilitate QI for HIV/AIDS services, in Nicaragua, Tanzania, and Uganda. The framework identifies and quantifies gaps in care quality for patients needing and receiving ART and uses CQI methods to develop and test changes that will improve coverage of PLWHA, increase patient retention, and enhance patient wellness.

Nicaragua: Dr. Rachel Jean-Baptiste and Ms. Fazila Shakir visited Nicaragua twice in 2009 to assist the HCI Nicaragua team in launching its improvement collaborative and support sites using the ART Framework to implement QI activities. HCI Nicaragua supports the MOH in implementing the framework in 12 hospitals and two health centers. The goals are to: increase the number of ARV-eligible patients on treatment, improve retention of patients on treatment, and improve patient outcomes by strengthening care and support for HIV-infected clients.

Uganda: Based on the ART Framework, HCI re-designed its HIV care QI strategy in Uganda in FY09 to work with groups of sites in smaller, focused improvement collaborative efforts. As detailed in section 2.9, new collaboratives were started in August 2009: 14 facilities are now working on improving access to ART, including strengthening links to HIV care from testing, PMTCT, and TB services; 13 sites are working on improving retention in care; and 14 are improving adherence and opportunistic infection prevention and treatment.

Tanzania: Dr. Massoud and Ms. Shakir introduced the ART Framework to the HCI team on-site in Tanzania in May and initiated framework testing in one clinic, Sabasaba, in Morogoro Region. Ms. Shakir worked with the QI team at the clinic to establish systems that capture data on quality indicators for coverage, retention, and wellness. To estimate for the coverage indicator the number of patients who require treatment each year, HCI developed a simple projection model, the "ART Framework Calculator," for facility- or district-level use. This instrument was shared with implementing partners and with district and regional health management teams in Tanzania.

Ms. Shakir and Ms. Faridah Mgunda assisted the Sabasaba QI team in collecting and analyzing baseline data on the quality of care from May 2008, when the clinic began providing ART services, through April 2009. A focus group discussion with ART patients and HIV care providers was conducted to identify and examine patients' barriers to maintaining HIV treatment. Figure 31 plots the reasons patients gave for missing clinic appointments as a Pareto diagram: It indicates that the three most common reasons (transportation problems, stigma, and lack of social support) account for two-thirds of missed appointments. Based on this information and other problem analysis, the Sabasaba QI team developed and introduced changes to the health care delivery system to address the most important barriers.

Figure 31. Tanzania: Reasons reported by ART patients for missing clinic visits, Sabasaba Clinic (n=23), April 2009

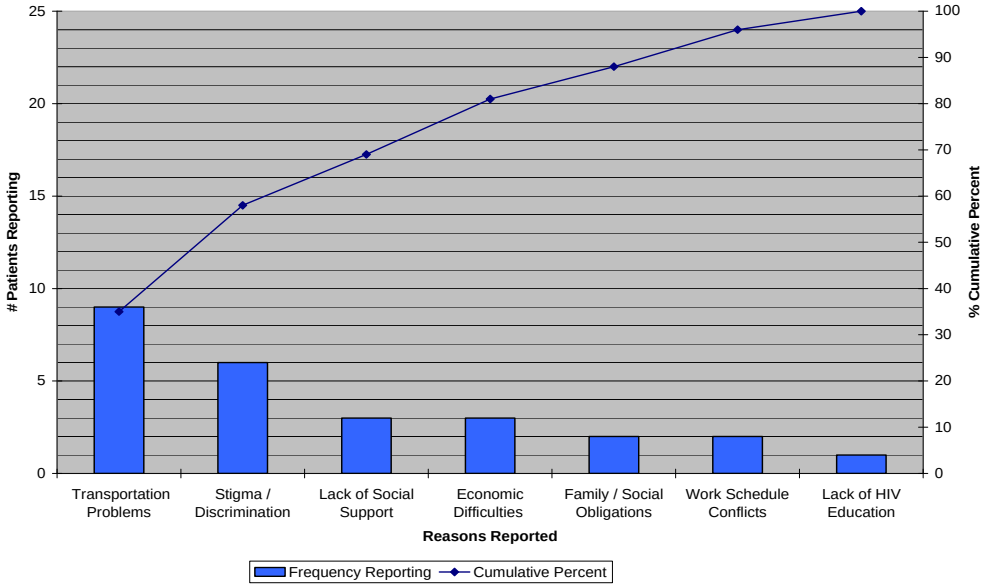


Figure 32 shows the progress the team made in narrowing gaps in patient retention and maintaining or improving patient clinical status. This figure presents data from May 2008, the month when the clinic began to provide ART services, through April 2009, when the ART Framework was introduced, and continuing to October 2009. Gaps in service coverage develop over time as patient load increases and providers cannot keep up because no system efficiently supports quality care. The figure reveals the gaps in retention and patient wellness that developed as the patient population increased before the ART Framework was introduced; however, it is heartening to see the steep incline in the number of patients receiving services. The first gap, coverage, has yet to be calculated pending data on patients who initiated ART within the region. The second gap, retention, is represented by the space between the yellow (expected to continue ART) and orange (keeping ART appointments) lines. Although the absolute number of patients not retained in care increased over time, the percentage of patients not retained has fallen (Table 5). This trend suggests that the absolute number of patients not retained in care will also decrease over time. The third gap, wellness, represented by the space between the orange (keeping ART appointments) and green (improved or controlled clinical status) lines, shows a clear improvement in wellness of patients on ART.

Table 6 summarizes the main changes the QI team implemented as they applied the ART Framework. Plans are underway for its implementation at more district and region sites as part of the regional ART/PMTCT Collaborative that HCI is supporting in Morogoro region with FHI, the lead implementing partner in the region.

Figure 32. Tanzania: Improvements in ART patient retention and clinical outcomes, Sabasaba Clinic, May 2008–October 2009

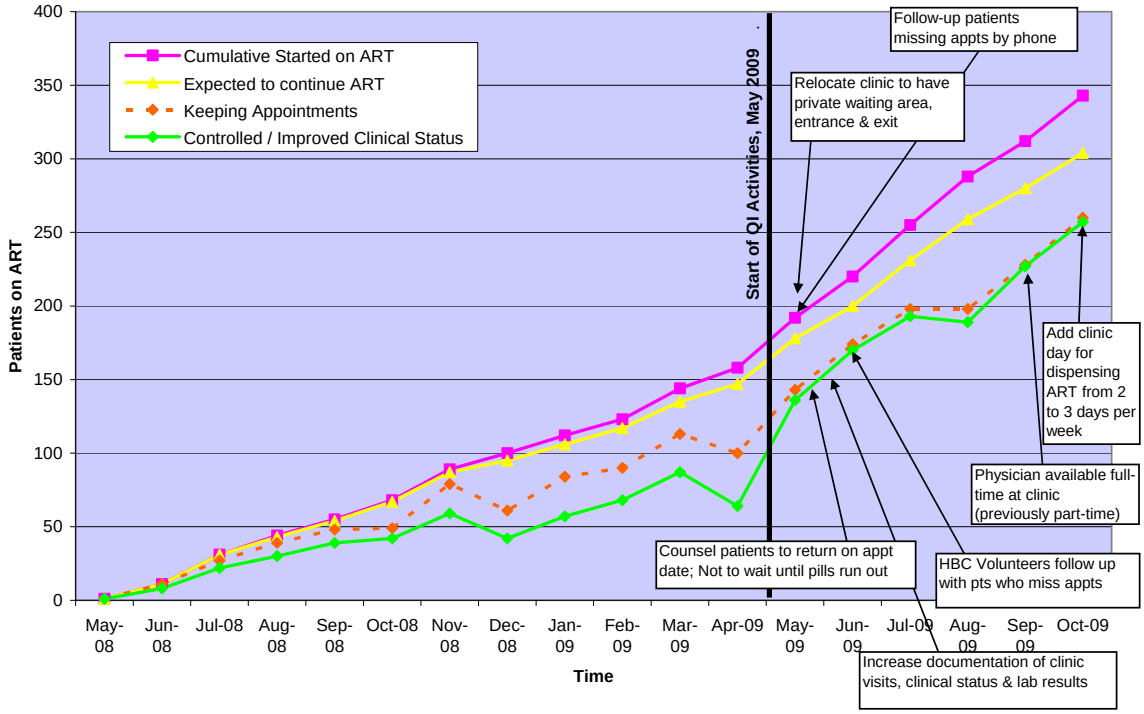


Table 5. Tanzania: Improvements in retention and the wellness gap, Sabasaba Clinic, May 2008–October 2009

	BASELINE (BEFORE START OF QI ACTIVITIES)												AFTER INTRODUCING FRAMEWORK					
Month/Year	5/08	6/08	7/08	8/08	9/08	10/08	11/08	12/08	1/09	2/09	3/09	4/09	5/09	6/09	7/09	8/09	9/09	10/09
Retention	100%	100%	87%	91%	89%	73%	91%	64%	79%	77%	84%	68%	80%	87%	86%	76%	81%	86%
Wellness	100%	73%	81%	77%	87%	86%	78%	74%	70%	87%	80%	75%	95%	98%	97%	95%	99%	99%

Note: The gap in coverage will be estimated at the regional level.

Table 6. Tanzania: Changes implemented at Sabasaba Clinic based on ART Framework

Barrier to quality ART care	Change
Fear of stigma and discrimination due to likelihood of being seen at the clinic	The HIV clinic was relocated to a space where the risk of encountering community acquaintances was minimized. This clinic has a private waiting area for HIV patients with a private entrance and exit.
Lack of privacy at the clinic	Screens and filing cabinets were used to partition the large room for HIV services into small rooms where patients are seen alone.
Poor documentation of clinical status and lab results	Medical records were organized in a cabinet so as to make it easier to locate patients' charts. This change improved documentation of ART appointments and patients' clinical status. Also, providers and lab personnel collaborated to reduce turnaround time for lab test results. They established a system to routinely file lab results into patient charts.
Transportation	Patients with this challenge were prescribed more medication at each clinic visit to reduce

Barrier to quality ART care	Change
difficulty	appointment frequency.
Follow-up of missed appointments	A routine was established to telephone patients who missed appointments. Staff call and check on patients and ask if they need any assistance getting to the clinic.
	The home based care (HBC) system for HIV patients was strengthened through close follow up and regular monthly meetings with clinic staff. The head of the HIV clinic, who manages HBC, coordinated with a CBO to do home visits for patients who are not doing well or have failed to follow up in clinic.
Unawareness of the importance of strict adherence to ART	Because many patients were not returning to clinic until they had exhausted their ARVs, providers began counseling them on the importance of not missing doses and not running out of medications.
Limited ART clinic hours	Previously, ART drugs were dispensed only twice weekly. A third day was added to the clinic schedule.
HR/doctor availability	Previously overburdened with duties outside of the clinic, the HIV physician is now assigned to the clinic full-time, a measure negotiated with the municipality.

Global Fund: Quality of Services Toolkit

USAID asked HCI to coordinate and provide TA to the Global Fund and OGAC to develop a toolkit for monitoring the quality of HIV, TB, and malaria services. Its specific purpose is to: 1) to enable the Global Fund (and other donors) to monitor the quality of services provided through their grant programs and 2) to enable service providers to improve service quality by identifying gaps in service quality and being able to recommend the design and implementation of targeted, needs-based QI activities. Measuring service quality would complement the existing performance assessment system, which is mostly based on measuring quantitative program outcomes. This project was delayed due to restructuring and other changes at Global Fund and will resume in 2010 once the Global Fund is ready to proceed.

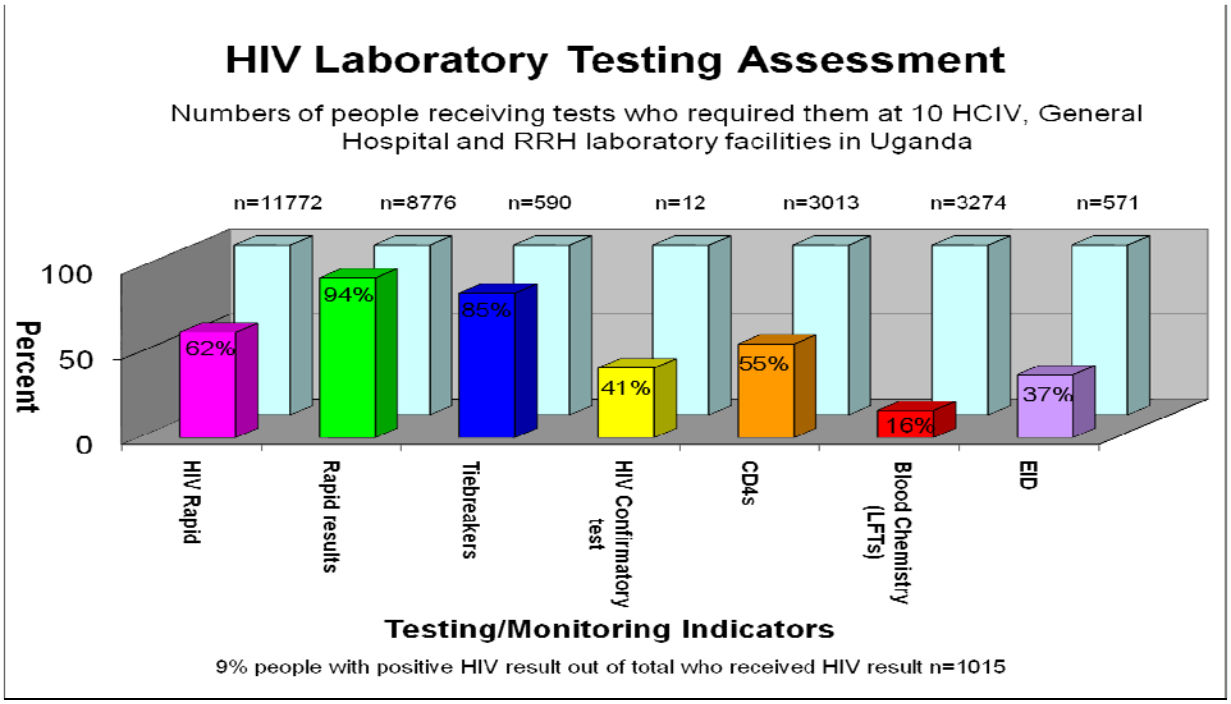
Laboratory improvement

The laboratory improvement project seeks to increase the numbers of clients receiving necessary HIV-related tests by improving lab processes and efficiency through improvement collaboratives. HCI conducted a detailed baseline assessment of 10 Ugandan peripheral labs in April 2009 to reveal focus areas for a laboratory improvement collaborative. The assessment compares the numbers of clients who needed HIV-related tests and those who received them. Figure 33 shows the percentages of people who received HIV-related lab tests from among those who needed them at 10 HCI-supported health facility labs. Based on these results, HCI has begun a laboratory-specific improvement collaborative with 14 facilities across Uganda. The collaborative held its first learning session in August 2009.

Quality of Services Toolkit

HCI continued to refine its HIV assessment tools in 2009; they are used in Uganda and Côte d'Ivoire to improve utility and ease of their use and are in preparation for assessments in other countries and for publication for use by others. We have contracted our partner FHI to lead a project to use the toolkit a third time, probably in Malawi in FY10. We are 1) working with the Malawi FHI staff and MOH to establish needs and goals for the planned assessment and 2) refining the tools and will train in-country staff to conduct the assessment in the spring of 2010.

Figure 33: Uganda: Percentage of clients requiring HIV-related tests who actually received them at 10 peripheral laboratories, April 2009



HIV training evaluation

HCI received FY09 HIV funds to evaluate HIV-related training programs in order to better understand training's effect on HIV-related practices over time. The training activities of interest include both single- and multi-component programs that incorporate various training activities and learning aids. Since the objective is learning for improvement, the evaluations are collaborative efforts with HCI technical staff and training program implementers. In addition to revealing the essential nature of training, these fast-turnaround evaluations will enable program implementers to quickly improve their programs.

We completed a literature review of evaluations of HIV-related training programs in FY09 and identified three training programs to evaluate: two in Uganda (a four-day course for medical records staff on a new standardized ART patient monitoring form and a 10-day course for clinical nurses on how to provide ART care, the last implemented by FHI based on the WHO-recommended ART training course) and one in Tanzania (a three-day course for PMTCT counselors on infant-feeding counseling).

We collaborated with Uganda's MOH to design the study protocol and data collection instruments and then attended both training programs to administer pre/post knowledge tests to trainees and to a control sample of MOH-identified non-attendees. In Tanzania, the evaluation will leverage an existing training evaluation data set collected previously by the Ifakara Institute but never analyzed. We received the data set at the end FY09; data analysis and feedback to implementers will occur in FY10.

Human resources improvement collaborative in Niger

The human resources collaborative in Niger uses HIV funds because of the importance of developing innovations and best practices in workforce retention, motivation, and performance improvement to address the global HIV workforce crisis. Please see section 4.2 for further discussion of the activities and results in FY09 from that collaborative.

Directions for FY10

Testing of the ART Framework will continue in Nicaragua, Tanzania, and Uganda and will be initiated in Cote d'Ivoire and Russia. Additional FY10 activities will include the development of a similar framework to improve the quality of care for HIV patients who are not yet eligible for ART (pre-ART). An instruction manual—to guide facilities in applying the ART framework, including setting up the data system and conducting improvement activities—will be completed and made available through the HCI web portal. After the third HIV quality assessment, the HIV quality assessment toolkit will be finalized and made available on the HCI portal. A new lab improvement collaborative will be developed in the Tanga Region of Tanzania in partnership with AIDSRelief. Follow-up data will be collected from trainees assessed in the HIV training evaluations in Uganda. A new HCI activity in FY10 will be to work with experts in chronic condition care to establish key design features, which would be based on the chronic care model, that are needed to improve HIV/AIDS services specifically in the context of developing countries. A technical advisory group meeting is planned for May 2010 in Kampala, with leaders in the field of chronic condition care from the Institute of Medicine, USAID, WHO, the Institute for Healthcare Improvement (IHI), and other organizations along with Uganda's MOH.

3.3 Tuberculosis

Overview of HCI's Program in FY09

What we are trying to accomplish	Geographic scale	Population coverage
Strengthen tuberculosis directly observed treatment (DOTS) implementation and TB-HIV coordinated activities through: - Intensified case finding - Improved infection control - Increased referrals from private providers - Community awareness - Provider compliance and patient adherence - Improved surveillance at provincial and district health facilities - Capacity building	Vietnam: 2 of 63 provinces in the country: - Thai Binh province: 13 facilities in all 8 districts - Hai Duong province: 24 facilities in all 12 districts	Thai Binh population: 1.8 million, including 497 HIV-positive patients Hai Duong population: 1.7 million
	India: 4 of 37 sub-districts (Ibrahimpatnam, Shamirpet, Ghatkesar, and Moinabad) in Rangareddy District of Andhra Pradesh State, covering about 89 village communities	Rangareddy District: 3.6 million; the four sub-districts have 400,000

Main Activities and Results

Strengthen TB DOTS implementation and TB-HIV coordination in Vietnam

During FY09, HCI completed a collaborative improvement project in partnership with the Thai Binh Provincial Health Department, the provincial TB hospital, and teams from 13 health centers representing all eight districts of the province. The work in Thai Binh was closely coordinated with the National TB Program (NTP) and Vietnam Administration for HIV/AIDS Control (VAAC).

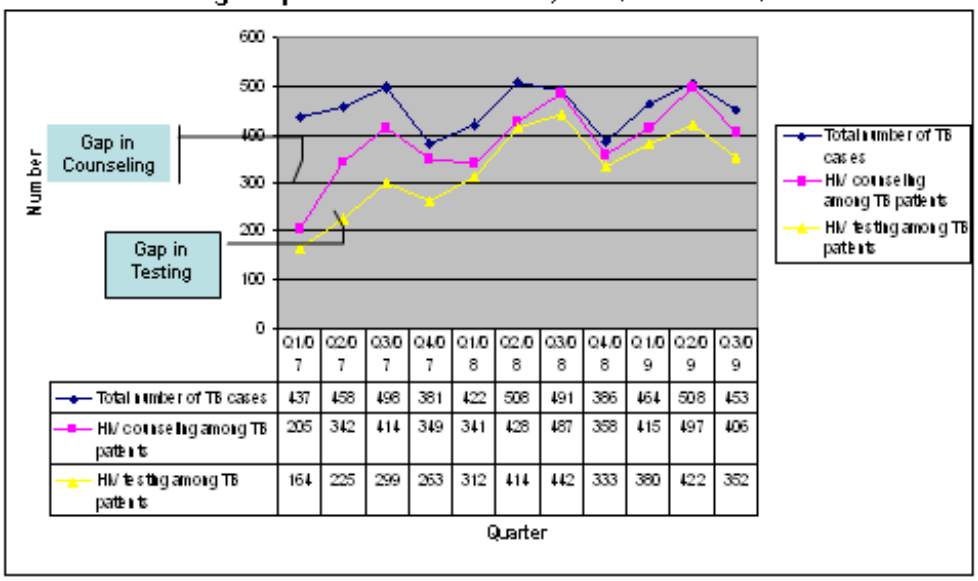
HCI's efforts this year focused on continuing to build health care providers' knowledge and skills in TB-HIV co-infection prevention, diagnosis, case management, and referral procedures, as well as in the use of QI tools and approaches; this was done through training and on-the-job mentoring.

HCI collaborated with the provincial health department and TB hospital to increase the involvement of private providers in TB and TB-HIV programs. Referral of TB suspects from these providers increased

significantly: The proportion of confirmed TB cases detected among suspects initially referred from private clinics accounted for 1.6% of all TB cases in 2007; 6.9% in 2008; and 7.1% in the first half of 2009. This compares favorably with the national average proportion of TB cases referred from private providers among 15 provinces with public-private mix activities, which was 2.6% in 2008 and 3.3% in the first half of 2009.

HCI also supported TB and HIV programs to increase case detection and management of TB-HIV co-infected patients and to improve TB screening services for PLWHA in facilities throughout the province. HCI staff visited facilities periodically for face-to-face meetings with staff. We also supported district-level meetings of TB control teams from district health centers and hospitals to review performance data and develop strategies for performance improvement. The HIV counseling rate among new TB patients increased from 27% in 2006 to 92% in 2009, and the HIV testing rate among new TB patients increased from 19% in 2006 to 81% in 2009. As shown in Figure 34, facilities in Thai Binh narrowed the proportion of new TB patients who were not tested for HIV.

Figure 34. Vietnam: Increased HIV testing and counseling among TB patients in Thai Binh, 1st Q 2007-3rd Q 2009



	Q1.07	Q2.07	Q3.07	Q4.07	Q1.08	Q2.08	Q3.08	Q4.08	Q1.09	Q2.09	Q3.09
Total number of TB cases	437	458	498	381	422	508	491	386	464	508	453
HIV counseling among TB patients	205	342	414	349	341	428	487	358	415	497	406
HIV testing among TB patients	164	225	299	263	312	414	442	333	380	422	352

At the same time, active TB screening among those PLWHA (most of whom were asymptomatic) increased from 56% in 2007 to 84% in 2009. The TB case detection rate among PLWHA screened for TB was 16% in 2007–2009.

Increase TB case detection and treatment in India

HCI's collaborated with the District Tuberculosis Control Office of Rangareddi district in Andhra Pradesh, India's fifth largest state, to develop and implement strategies to integrate PHC and private health care providers in the TB program. Non-TB service providers (auxiliary nurse-midwives/ multipurpose health workers/Anganwadi workers/accredited social health activists) were trained to identify TB suspects and refer them for testing. HCI also supported four social communicators who visited one village every day, thus covering 89 village communities each month. They sought to increase case detection, create greater community awareness of TB symptoms and treatment, enhance patient adherence to treatment, and enlist private provider participation. Outcome analysis for the last ten months shows a 14% increase (from 1,458 to 1,656) in screening of new TB suspects and a 33% increase (from 173 to 230) in detection of new TB cases who were put on DOTS. In January–September 2009, the number of visits to TB facilities increased from 2,282 to 2,559, raising case detection by 12%.

Directions for FY10

No further TB activities will be implemented under HCI TO1. New TB funds for FY10 were allocated to HCI TO3, so continuing work in Vietnam and India will use TO3 funding.

4 Common Agenda Activities

4.1 Project Management

Activity	What we are trying to accomplish
Efficiently manage project finances, planning, and administrative processes	▪ Further standardize budgeting and financial tracking systems to improve clarity and reduce staff workload ▪ Complete work planning and budgeting for FY10 using new templates and participative process; decentralize ownership of activity-level financial management
Submit contract deliverables	▪ Ensure timely submission of deliverable and approval requests, including Year One Annual Project Report and Self-Evaluation Report and Year Two Work Plan
Ensure efficient and effective staffing	▪ Meet needs of growing project ▪ Improve processes for training and orientation of new staff
Ensure efficient technical coordination among project activities and timely reporting to the COTR	▪ Hold weekly meetings of Project Director and COTR ▪ Conduct quarterly review meetings with COTR and invited guests presenting results on all project activities ▪ Conduct monthly senior management meetings, headquarters staff meetings, and technical seminars ▪ Convene Country Directors/Chiefs of Party for management and technical training and consultations at URC headquarters in May 2009

Main Activities and Results

Ensure efficient financial and administrative management

HCI's financial management systems that had been established during Year One continued serving the project's need in Year Two, with significant process improvements. We established a process for streamlined yet detailed variance analyses for activity line items in FY09, allowing for scheduled realignment of all budgets so that forecasts can be updated and funding streams used more efficiently throughout the year for each country and global initiative. The annual budgeting process was redesigned during the preparation of FY10 work plans/budgets, with a dual focus on decentralization (delivering complete knowledge of and responsibility for activity budgets to country and global initiative directors) and cooperation (allowing countries and global initiative groups to harmonize their budgets to best use both individual and pooled resources across the entire project). Budget owners were assigned for each project activity to track and manage expenditures; these individuals are empowered to make decisions about alternative resource use to best meet objectives as activities are implemented.

Despite HCI's large increase in both budget and number of field activities, URC has maintained and increased efficiency of human resources, financial, contract, and administrative management. Further standardization of budgeting and financial tracking systems has improved clarity and reduced staff workload, and formats and templates for reports and deliverables have been further standardized. Work planning for FY10 was carried out using new templates, decentralized ownership of activity-level financial management, and a participative workshop process that included negotiations on staff time allocation to individual activities.

Reporting and deliverables

The preparation of contractually required deliverables and other reporting to USAID are overseen centrally and conform to the deliverables schedule outlined in Section F.6 of the TO1 contract and

templates and formats established in Year One. Contributions from technical groups and countries are submitted to the headquarters communications team using templates that allow for efficient compilation of all contributions. In addition, many informal reports were delivered throughout the year to Missions and Element Groups at USAID/Washington. While prepared and delivered locally, these are also overseen centrally to ensure quality reporting, efficient production, and internal technical coordination through project-wide sharing.

Project staffing

At the headquarters (HQ) level, new Directors and Senior Advisors for critical technical areas came on board in Year Two. Dr. Youssef Tawfik joined HCI in May 2009 to lead the project's maternal, neonatal, and child health programs. Dr. Suzanne Gaudreault was hired to lead the project's HIV/AIDS and infectious disease efforts, and Dr. Edward Broughton, a consultant with subcontractor EnCompass, will lead research on the cost-effectiveness of quality improvement interventions. The last two will be full-time on the project early in FY10.

In addition, HQ management and technical clusters have hired corresponding mid-level advisors and support staff to deliver on the increasing scopes of work USAID has contracted to URC through the HCI project. Similar increases in technical advisors and management and support staff have occurred at the field level throughout Year Two. As at HQ, field staff growth has occurred in a planned manner in response to the increased scope of work specific to each mission-funded field activity. With a growing staff, we have begun internal process improvement activities for new staff training and orientation.

Coordination of technical activities

The Technical Advisory Group and the Country Director/Chief of Party mid-project review meetings were convened in May, bringing together global HCI staff for the first time since the project launch and providing a forum for discussions on HCI's technical progress and future directions. Convening all HCI Country Directors afforded an opportunity to review overall progress toward meeting Task Order 1's performance objectives and targets and valuable opportunities for technical sharing across country teams.

Ongoing project progress has been monitored and managed through sets of recurring meetings. During the third week of each month, a series of monthly meetings are held at HQ to review progress and prioritize major activities, including a senior management team meeting and an all-Bethesda staff meeting. Once a quarter, a technical review meeting is held with all staff (with field staff participating by telephone or WebEx) and the Contracting Officer's Technical Representative (COTR). The senior management team meeting was established to occur between quarterly review meetings and permit more in-depth discussions of specific technical areas and country programs. Quarterly review meetings with the COTR were held in October 2008 and in January, April and July 2009 to review results by country and project activity.

Directions for FY10

While ensuring continued adherence to policies and procedures and maintaining efficient project management, the administrative team will continue to refine and improve administrative and financial management processes. The team is undergoing a full process analysis of the financial system. In addition to continued rollout of new software, the team is identifying other steps in the financial and accounting continuum and testing changes, the most successful of which will be implemented system-wide. This process analysis and improvement will be applied to other core administrative functions in FY10, including staff training and orientation, travel procedures, logistics management, and technical reporting.

4.2 Human Resources Planning and Management

Overview of HCI's Program in FY09

What we are trying to accomplish	Geographic scale	Population coverage
Improve worker productivity and retention and quality of services through the first HR collaborative ***(HIV funds)***	Collaborative demonstration phase: 11 management QI teams and 15 facility-based QI teams, including 5 control facilities in 3 districts in Niger	445 health workers
Count and determine the functionality of 100,000+ community health workers (CHWs) providing MCH services ***(MCH funds)***	Implement activity in ≤ 30 priority MCH countries in order to assess programs with 100,000 newly functional CHWs	100,000+ CHW in ≤ 30 MCH priority countries

Main Activities and Results

Implement a human resources collaborative in Tahoua, Niger

HCI launched its first human resources (HR) collaborative in FY09 to improve worker productivity and retention and quality of services. The collaborative relies on employee engagement and team-based management approaches. Its demonstration phase, in Tahoua, includes 16 facilities in eight districts and 11 regional and district management teams.

We led a baseline assessment to identify gaps in HR systems at the central level and in three districts (Tahoua, Marady, Tilabery) in 15 facilities and five control facilities. The baseline informs collaborators of the current state of HR systems from the perspectives of MOH, regional management, district management, and individual health workers; the current state of elements of performance management and support from all perspectives; the degree of employee engagement; health worker productivity; and bottlenecks in services.

Two linked collaboratives were formed (facility- and management-level teams), and a change package was developed and validated by local experts and stakeholders. The change package has seven improvement objectives related to a team-based performance management process that, ordered stepwise, runs from clarification of objectives through evaluation of/reward for good performance. Facility-level changes include rationalizing work processes, testing interventions for feedback, capacity development and evaluation; management-level changes include improvement of coordination meetings (management staff and among managers from districts and region) and supervision practices and increased coaching of facility staff. With collaborators, we selected clinical indicators to monitor improvements in care quality as management interventions are tested. Indicators relate to deliveries, postpartum hemorrhage, family planning, and care for children under five years of age.

The collaborative's first round of improvement activities, focused on the first improvement objective, were completed by all teams; they aligned individual goals to national level goals and expectations, rationalized the roles and tasks of facility teams and individuals, and developed changes to improve productivity of teams and individuals. Teams will begin the second round of changes in December 2009, addressing competency and skill gaps, performance feedback, and evaluation.

Community health worker assessment

In response to USAID's congressional mandate to increase the number of CHWs in USAID MCH priority countries, HCI developed and tested a tool to count functional CHWs and improve overall

program functionality within priority countries. The specific objectives of this tool are to:

- Assess the functionality of CHW programs in maternal/child health,
- Count the number of CHWs in programs assessed as functional, and
- Assist in action planning and resource allocation to strengthen CHW programs.

In close collaboration with USAID, the assessment tool was first field tested in two districts in Nepal in Ma, 2009 with JSI and the Nepal Family Health Program. The test assessed the Female Community Health Volunteers and the Maternal Child Health Workers and found both programs to be functional while identifying improvements. Well received in Nepal, the tool will be tested in Benin in FY10.

Directions for FY10

For 2010, the HCI Health Workforce agenda will be to push the HR Collaborative forward to complete the performance management cycle in Niger and launch an integrated HR collaborative in Tanzania. Lessons learned from this work will also be applied in Uganda (productivity and engagement), Tanzania (performance management), and Ethiopia and Nicaragua (employee engagement). For the CHW assessment, the tool will be tested in Benin, adapted for high-burden HIV countries, and applied in at least two other countries. We will conduct operations research while applying the tool to determine what improvements are possible in CHW programs when program functionality is assessed.

4.3 Knowledge Management

Overview of HCI's Activities in FY09

What we are trying to accomplish	Scope
Develop an HCI Knowledge Management (KM) web site to serve as the global hub for sharing improvement results and information about field applications of QI methods and country experiences with improving health care	Global: www.hciproject.org, health care improvement portal developed with the Johns Hopkins Center for Communication Programs Private extranet for technical sharing among project staff and partners: http://intranet.hciproject.org
Support the development of sister web sites to support regional KM activities related to specific content areas and country needs	Global: www.ovcsupport.net, managed by AIDS Alliance as technical resource for OVC programs; HCI developed a section of the site on QI for OVC programs Russia: www.healthquality.ru, private extranet for sharing of results among teams in MCH collaboratives and public site for sharing QI methods and MCH resources Latin America: www.maternoinfantil.org, Spanish language site for knowledge-sharing in maternal and newborn care; www.alianzaneonatal.org, site to features activities of the LAC Newborn Health Alliance

Main Activities and Results

Complete and launch the Health Care Improvement Portal

During FY09, HCI staff worked with personnel from URC subcontractor Johns Hopkins Center for Communication Programs (CCP) to complete the programming and content development for the hub of the project's knowledge management system, the Health Care Improvement Portal. The Portal was launched on September 30, 2009 at www.hciproject.org.

The Portal's mission is to facilitate documentation and sharing of practical knowledge, best practices, tools, and implementation experiences to support improvement activities in the following topic areas: maternal, newborn, and child health; reproductive health; orphans and vulnerable children; HIV/AIDS; malaria; tuberculosis; patient safety; and human resources/workforce development. The new site contains over 60 resources related to improvement methods and over 130 resources for improving care in the site's eight focus topic areas, including tested methods and interventions for improving specific areas of care and improvement experiences from around the world. The sites features relevant HCI reports and publications from its predecessor project, the Quality Assurance Project, as well as over 60 resources external to HCI (other web sites and non-URC publications).

Home page of the Health Care Improvement portal.

Beyond the technical resources offered on the site, its central and unique feature is a database of Improvement Reports—short reports about specific health care improvement experiences—and Collaborative Profiles—descriptions of improvement collaboratives and their related tools and information for those interested in developing a collaborative on a similar topic. The database will support the exchange of ideas and lessons among health care providers and improvement practitioners. To submit an improvement report, users must first register on the site.

Launch the project Intranet for technical sharing

To support knowledge management within the HCI Project team and enable country and headquarters units to share technical information via the web, CCP created a private Intranet work space separate from the main HCI Portal for HCI staff, COTR, and partners. The HCI Intranet was launched in July 2009. Individual HCI staff and partners can post documents, announcements, blog entries, and photographs and participate in threaded discussion forums. During August and September, headquarters staff from the research and evaluation and communications teams used the site to post research tools and conference information previously distributed by email. The Intranet was transferred to its permanent address, http://intranet.hciproject.org, when the main HCI web site went live in September.

Develop and launch a maternal and newborn care knowledge management web site in Spanish

The HCI Ecuador team launched in March 2009 a Spanish language MCH knowledge-sharing web site, www.maternoinfantil.org. The site features information and related resource documents in Spanish on key evidence-based practices for maternal and newborn care. The site also allows users to upload to the site technical materials, implementation experiences related to improvement of maternal and newborn care, and news items (user registration is optional but encouraged). Users who provide name, country, and email address can participate in discussion forum by posting comments in response to topics initiated by HCI staff.

User postings to the Spanish language MCH knowledge-sharing website, www.maternoinfantil.org, have continued to grow since its launch. Through September 2009, the site had attracted 13,384 unique visits, an average of 73 a day; usage in the fourth quarter of FY09 increased over that in the third, when daily visits averaged 49. Through the end of FY09, 241 articles, experiences, and tools had been posted, including 10 from users outside HCI or URC.

Develop public QI portal on Russia Web Communicator

In June 2009, the HCI Russia team and its counterparts in the Russian Central Scientific Institute for Informatics and Public Health re-launched the Web Communicator originally developed with funding from the Quality Assurance Project II. The redesigned Russian language Internet portal, www.healthquality.ru, is available as a password-protected site for use by participants in the MCH/RH improvement collaboratives that HCI is supporting in three oblasts. Teams and coaches are using the site to share technical materials, indicator data, and announcements. We are developing a public section of the site to make information on improvement methods and experiences available in Russian.

The site has features to support planning, communication, and reporting in the "Improving Care for Mothers and Babies" project, including: recording data about project participants and participants in training and other activities; messaging between participants; a library for project documents and reference materials on QI methods and clinical topics; an electronic version of the QI team documentation journal to record improvement activities, team meetings, key changes, and decisions; reporting progress on indicators; and scheduling of project activities and events. Additional functions, such as production of training reports and plotting of run charts, will be added in FY10.

Develop a web site to support the LAC Neonatal Health Alliance

HCI agreed in FY09, as part of its participation in the inter-agency Latin American and Caribbean Neonatal Health Alliance, to develop a web site in Spanish and English that would promote the activities of the Alliance and share best practices in newborn care. PAHO and Save the Children each contributed $5,000 toward the design of the site, which is being developed in Ecuador by the programmers who created our maternoinfantil.org site. The new site's initial design included an extensive section of technical information on various topics related to newborn health, but it proved difficult to assemble such information and keep in updated. In July 2009, members of the Alliance agreed that it was not feasible to try to post on the Alliance web site information (overview, best practices, country experiences) on topics as was planned but rather to link to other web sites with such information. The site text will be developed following on the September technical forum of the Alliance in Peru and will draw on the materials presented at the technical forum.

Contribute quality improvement content to the OVC Support web site

HCI's OVC team sent updates to the AIDS Alliance in February 2009 for posting on the QI pages of the www.ovcsupport.net website. The Alliance posted the material and advised us that the OVC Technical Working Group had contracted with Management Sciences for Health to redesign the site under an AIDSTAR II task order. The redesigned site will emphasize successful best practices and tools and make the site more interactive, with discussion fora, blogs, tool reviews, and other features to promote dialogue and exchange and support communities of practice.

Directions for FY10

HCI will promote the Health Care Improvement Portal among USAID missions, USAID partners, and other organizations working in health care improvement to elicit contributions to and use of its improvement database by providers and organizations outside the project. Spanish and French versions of the HCI Portal will be launched, and the French and Spanish language content will be promoted among regional audiences and organizations working in Francophone Africa and Latin America,

respectively. A series of studies will be carried out to evaluate usage of the HCI Portal and maternoinfantil.org site to assess user experience and satisfaction with the sites and to inform ongoing enhancements. HCI will continue to develop new content for both sites and strengthen linkages between the two and with other health care knowledge management sites. New functionality will be added to selected pages of the HCI Portal to test and evaluate the use of blogs and moderated discussion forums. The public information side of the Russian improvement portal will be launched to make available materials on quality improvement and the clinical resources that have been developed as part of the MCH/RH collaboratives in Russia. In partnership with other members of the LAC Neonatal Health Alliance, HCI will finalize and launch the Alliance web site. HCI will work with the AIDS Alliance and India AIDS Alliance to redesign the QI section of the www.ovcsupport.net site, incorporating new content from the QI roadmap, OVC QI eLearning modules, and recent field applications and making use of the redesigned site's interactive features.

4.4 Research and Evaluation

Overview of HCI's Program in FY09

What we are trying to accomplish	Where
Develop and test a Standard Evaluation System (SES) to support learning within the HCI Project	SES QI team tools are in use in Benin (56 teams), Honduras (14 teams), Russia (8 HIV teams and 22 MNCH teams), Guatemala (90 teams), Cote d'Ivoire (41 teams), Tanzania (8 teams in each of two regions), Uganda (20 teams in one region and 34 in another)
Spearhead the study of spread and institutionalization	Ecuador spread study – sample of 15 sites of 59 sites targeted for spread (which represent 39% of total sites) Niger institutionalization study – sample of 20 of 51 teams, in 6 regions (which represent 83% of hospitals in the country and 18% of peripheral maternities)
Institute an appropriate level of rigor for measurement and analysis	Global
Support country teams to answer key questions	As requested by country teams

Main Activities and Results

Develop the Standard Evaluation System and conduct research on knowledge management

Because additional countries were interested in adopting the SES tools, the Research and Evaluation (R&E) team conducted, with participating countries, an interim synthesis of findings and learning from application of the SES tools. The synthesis effort involved a collaborative and interactive process with participating country programs. Results were used to assist several additional HCI countries that subsequently adopted the tools. Table 6 lists the countries using the SES and the tools they use. Countries that initially introduced SES tools as part of the testing have expanded their use:

- Benin/PISAF (Integrated Family Health Project) in its family planning and human resource management collaboratives;
- Russia's MCH collaboratives (SES team journal and a modified SES synthesis tool);
- Tanzania's Morogoro, Mtwara, and Lindi collaboratives (SES team journal and SES database)
- Uganda's district health management collaborative (SES team journal)

Table 6: SES countries, test participation, and tool use

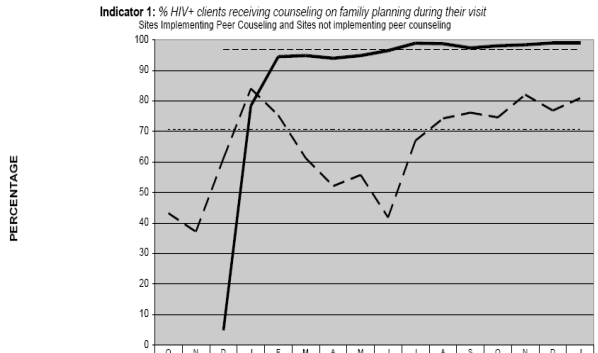
		SES tool		
Country	**Participated in test**	**Journal**	**Synthesis form**	**Excel database**
Afghanistan	No	X	X	X
Benin/PISAF	Yes	X	X	X
Cote d'Ivoire	No	X		X
Guatemala	No	X		
Honduras	Yes	X		
Niger	Yes	X		
Russia	Yes	X	X	
Swaziland	No	X	X	X
Tanzania	Yes	X		X
Uganda	Yes	X	X	X

A descriptive document of the Standard Evaluation System was produced in March and can be found on the HCI Portal at http://www.hciproject.org/improvement_tools/research_evaluation.

During FY09's 3rd quarter, after a discussion with country directors participating in the SES testing, the R&E team revamped the SES testing end-line tools, translated them into French and Spanish, and shared them with country teams. Although a cross-country summary of results was originally planned for FY09, countries needed more time to leverage learning sessions and other events for data collection. Country reports and the synthesis report will be done in FY10.

The R&E and Uganda country teams collaborated to develop and test methods for evaluating results for specific changes across teams, using aggregated data displayed in run charts. This test used data from the Uganda FP/HIV collaborative. Attempting to analyze changes across teams generates challenges related to different periods of implementation and confounding from changes being implemented simultaneously. However, the analysis provides some direction in developing an evidence base on effective changes. Figure 35 shows results for those teams implementing a specific change (i.e., FP counseling for HIV-positive patients) (solid line) and those teams not implementing it (broken line).

Figure 35: Indicator 1: Percentage of teams implementing vs. not implementing a specific change, 10/2006–1/2008



	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J
		2006								2007						2008
Implementing Denominator			431	254	4098	4568	4547	4921	5394	5598	5987	6963	6679	6753	6400	7031
Implementing Median			97	97	97	97	97	97	97	97	97	97	97	97	97	97
Implementing Mean # of other changes	0.0	0.0	0.3	2.3	2.3	2.3	2.3	2.5	3.0	3.0	3.1	3.0	3.1	3.2	3.2	3.2
Sites Implementing	0	0	4	3	9	9	10	10	10	10	10	9	10	10	10	10
Implementing Percentage			5	78	94	95	94	95	96	99	99	97	98	98	99	99
Non-Implementing Denominator	895	879	371	4334	429	253	344	447	632	738	676	881	746	794	672	806
Non-Implementing Median	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71	71
Non-Implementing Mean # of other changes	0.1	0.1	0.2	0.7	1.0	1.4	1.8	2.3	2.3	2.3	2.3	2.8	2.5	2.5	2.5	2.5
Sites Not Implementing	14	14	10	11	8	5	4	4	4	4	4	5	4	4	4	4
Non-Implementing Percentage	43	37	61	84	75	61	52	56	42	67	74	76	75	82	77	81

Numerator: *# HIV+ clients receiving family planning counseling during their visit* **Data Source/Sampling:** *HIV registers*
Denominator: *# HIV+ clients coming for care during the month* **Any important changes in measurement:** *List out any changes in measurement*

Uganda HIV FP Collaborat#27.xls

Implementing peer education

Research on spread

Spread was a major focus area for R&E in FY09. The R&E Unit and the Ecuador country office developed a conceptual framework for studying spread, a study protocol, and data collection instruments to evaluate three key questions related to MOH efforts to spread learning from the EONC demonstration collaborative (2003–2007) to five priority provinces and 54 additional hospitals. Box 3 provides an overview of the

design and progress on this study. Study implementation was significantly delayed due to unavoidable difficulties, such as the H1N1 virus.

A few other studies on spread had been proposed for FY09, but have been moved to FY10 due to program implementation. Spread could not be studied in Niger due to lack of funding for spread activities. The development and testing of indicators for spread that country programs could report on has also been moved to FY10, as this was to be based on emerging results from the Ecuador study. However, the research protocol from Ecuador has been used to develop designs for other countries in FY10.

Box 3. Research on the spread of better care practices in Ecuador

HCI's Ecuador program is one of the longer running QI programs and has served as a laboratory for testing new models of QI and technical content that have been spread to other countries (Nicaragua, Guatemala, Honduras, El Salvador, and Bolivia). The Ministry's decision to scale up EONC better care practices emerging from the EONC collaborative as part of the Maternal Mortality Reduction Strategy offered an opportunity to study the spread of improvements. This study includes both descriptive and analytical components that will help us understand how the spread strategy was planned and implemented, how well new sites were able to use the new content and carry out basic QI functions, and what results they achieved and how quickly. The costs of spread under this process are also being evaluated. This study will provide continuous feedback to the Ministry on how its strategy is working and to other countries on lessons learned in spreading on a national scale.

The Ministry has identified five priority provinces and their 54 facilities for the maternal mortality reduction strategy: These 54 facilities account for about 65% of all births in Ecuador's 152 facilities. The study itself focuses on 15 facilities, representing 33% of all facility births in the country. Data collection has four components:

1) Document review and interviews to understand the process for planning and implementing the spread strategy;

2) External audit of clinical charts to independently assess the quality of care and the validity of results produced by new sites;

3) Individual and group interviews with QI teams to assess usefulness of documents and the www.maternoinfantil.org website on better care practices, engagement and competency for CQI, perceptions of support from provincial teams, and implementation of CQI; and

4) Individual and group interviews with Provincial spread teams to assess matters similar to those in #3.

A descriptive report on the planning, preparation, and initial implementation of the spread strategy has been drafted and is under review. Baseline data collection was completed in the last quarter of FY09 in 14 sites, and initial results are being analyzed. A report will follow two or three more rounds of data in FY10.

Issues and questions emerging from this work include: What kinds of changes and better care practices can be easily adopted by new sites and which ones require significant adaptation and plan-do-study-act cycle testing? How much support do new teams need to be able to adopt better care practices? Can these functions be effectively integrated into decentralized-level responsibilities (provincial health offices)?

Research on institutionalization

Institutionalization was the second major research focus area for FY09. The R&E team and Niger country team developed a conceptual framework, a study protocol, and data collection instruments to measure the institutionalization of EONC better care practices and QI in a sample of 20 of the 51 health facilities that participated in the EONC collaborative that ceased in late 2008. Results from the baseline measure of institutionalization (June 2009) were used to develop an institutionalization change package that August: It will be evaluated in FY10. Box 4 summarizes the design and progress to date.

The conceptual framework and data collection instruments were also used to develop the design for an institutionalization study in Honduras, but political developments delayed implementation until FY10.

Box 4. Research on institutionalization of EONC better care practices and QI in Niger

HCI's Niger program is another long running QI programs, whose QI models of QI and technical content have been spread to other countries in the region (Benin, Mali, Cote d'Ivoire). With the end of financial support to the QI implementation activities in late 2008, Niger offered the perfect opportunity to study what happens after a project ends, and work with the Ministry of Health to develop effective institutionalization strategies. The study seeks to:

1) Determine the degree of institutionalization of quality care and of QI implementation, at site, district, regional and central levels, at the end of the active phase of the collaborative, and five months after;
2) Describe the implementation processes used during the collaborative which facilitated the institutionalization of quality care and QI, both at the point of service delivery and higher levels of the health system;
3) Identify the intermediate effects of collaborative implementation on creating an enabling environment for better care practices and QI at the point of service delivery, and at district, regional and central levels;
4) Use study results on the level of institutionalization achieved through the collaborative's implementation processes to define a focused institutionalization strategy to be implemented by the Ministry of Public Health;
5) Evaluate the effectiveness of a set of focused institutionalization strategies on level of institutionalization.

Niger's EONC collaborative operated in 51 sites in 7 of Niger's 8 regions, and covered 80% of national/regional referral maternities, 67% of district maternities, and 12% of peripheral maternities. The study was conducted in 20 sites that are both geographically and system-level representative. Study teams collected "baseline" data through external audit (3,660 charts), observation (n=40) and simulation (n=65)of care delivery, and individual and group interviews with QI team members (n=90), coaches (n=13), and district (n=42), regional (n=45)and national level (n=7) staff. Key stakeholders from national, regional, district and facility then used this "baseline" assessment of the current level of institutionalization of better care practices and QI at six months after the end of the collaborative's active phase to develop an "institutionalization change package" The change package focuses on key activities/ideas to test at all levels of the health system, and not only tackles issues related to quality of care, but also to partnerships, resource mobilization, planning, continuum of actions within the system, and widening the application of QI to new areas and opportunities. The figure at the right presents a small sample of change package ideas for the regional health management team level.

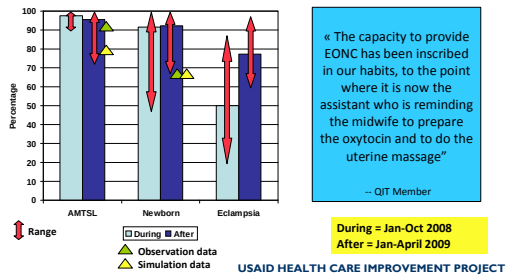
Objective: **Strengthen technical and organizational capacity of the RHMT to provide adequate support to health facilities**

Change concepts	Ideas of changes to test
• **Provide technical and moral support and coaching to district health teams and health facilities**	***- Integrate follow-up of QI activities into Supervision Checklists*** ***- Insert follow-up of QI activities into job descriptions for RHMT members*** ***- Reward best performing sites during Coordination Meetings***

Key findings from the baseline indicate that compliance with AMTSL and newborn standards have been maintained over time (see figures below), and level of quality validated by independent observation data. Management of pre-eclampsia and eclampsia started lower, due to late launching of this phase (June 2008), but improvements are visible into the "post-collaborative" period. QI teams continue to implement QI activities, although some key areas remain problematic, particularly related to use of process diagrams and time series charts. Other results indicate engagement of the district and some regional level staff in the collaborative process to be a weak area that will require consistent focus in the design and implementation of the institutionalization change package.

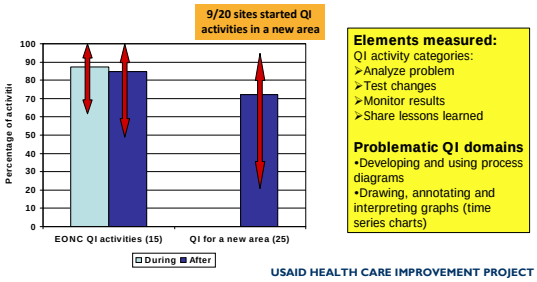
Results: The quality of care for EONC has been maintained over time

Measure: quality of care for EONC services provided to patients



QI teams continue to implement most of the key QI activities (n=20 sites)

Implementation of key QI activities for both EONC and new areas



During the Technical Assistance Group (TAG, detailed below in section 4.5) and subsequent meetings, headquarters and field staff discussed institutionalization and how to measure it (what will we see when better care practices and QI are institutionalized). A draft list of indicators for evidence of institutionalization has been developed and will be refined in FY10. Because the Niger study baseline was postponed until June 2009, work on indicators, to be based on the Niger experience, was postponed to FY10. Preliminary results from the Niger study were shared with the COTR, headquarters, and field staff in September.

Development of guidance on measurement

Several products and presentations related to QI measurement issues were prepared and shared this year. Sampling for time series charts, a topic from last year, is the subject of a draft paper that uses statistical sampling techniques for repeated measures and outlines their application to QI data. This sampling strategy allows us to assess the statistical significance of results when site-level rigor is needed. The paper will be reviewed and produced in FY10 and will include a short job aid for use by country programs. Analysis of time series data, using run chart rules, was presented to all country directors. This will be followed up in FY10 with written guidance. Norms for data presentation were translated into French and Spanish.

Provide support to country teams on local measurement issues and local research and evaluation agendas

As few countries had planned studies in the FY09 workplan, R&E support on specific studies (in addition to those discussed above or initiated with Core funds) mostly related to those that had already been initiated. The full range of studies completed or ongoing can be found in Tables 8 (studies completed this year) and 9 (ongoing studies). To provide a list of studies and correct any discrepancies with previous lists, we include Table 10 that presents studies that were listed in either the Year One annual report or subsequent quarterly reports and which are no longer active studies, as well as Table 11 that lists studies that have been delayed until FY10.

The R&E Unit worked with each country program during the summer of FY09 to help develop their research/ evaluation agendas for FY10 and needs for headquarters support in implementation. Approximately 30–35 studies of varying sizes will be carried out in FY10.

Table 8. Research and evaluation studies completed in Year Two (FY09)

Country	Title	Content
Studies completed in FY09		
Bangladesh (Infectious Disease Core)	Bangladesh: Assessment of stores system for tuberculosis	Funded by WHO and QAP, this study documented TB drug and supply storage conditions and adherence to NTP procedures at district and sub-district levels in 60 health facilities. The study found poor drug storage conditions, adequate quantities of drugs for the estimated patient load, lack of appropriate inventory medicine destroy procedures , and mixed findings with respect to quality assurance. Recommendations for improvement have been presented to the NTP, WHO, and NGO representatives.
Benin (MNCH Core)	Task shifting in MNCH counseling: Evaluation of the quality and impact of counseling by skilled and unskilled health care workers in	This pre-post intervention trial evaluated the quality and impact of maternal and newborn care counseling by skilled and unskilled health care workers in fourteen government facilities in Zou/Collines, Benin, following introduction of job aids and task shifting. Study methods consisted of direct observation and exit interviews with pregnant and recently-delivered women as well as in-depth interviews with skilled and unskilled providers. Baseline quality of counseling by nurse-midwives was low, but significantly improved following introduction of a job aid-focused intervention. The mean percentage of recommended messages provided significantly increased in birth preparedness, danger sign recognition, newborn care, and home practices. Improved quality of counseling was also

Country	Title	Content
	Zou/Collines	associated with significant increases in the proportion of women knowing at least three messages relating to these topics. Task-shifting to lay nurse aides resulted in similar improvements in counseling with significantly higher levels of maternal knowledge. The job aids were found to be acceptable and consistent with existing practices, and delegation of tasks to less skilled cadre was shown to improve provision of care.
Cote d'Ivoire (Mission)	Assessment of VCT, PMTCT, care and treatment for HIV/AIDS	This assessment of the quality of HIV/AIDS care and services (VCT, PMTCT, ARV) in Cote d'Ivoire was carried by PNPEC, URC, district health teams, and key PEPFAR implementing partners. The assessment covered 41 sites throughout the country, and used a cohort approach in examining patient records for three cohorts: pre-ARV, ARV and PMTCT. Other methods of data collection included interviews with head physicians and patients and evaluating laboratory procedures. Results indicate that the quality of care provided during early visits was acceptable, but that follow up care was intermittent and difficult to base on previous information. Patient retention was a significant problem. The results of the assessment have been used to design collaborative improvement in the 41 sites focusing on improving documentation of care provided and retention of patients in the system.
Ecuador (MNCH funds)	Humanization, cultural adequacy and demand generation for quality maternal care ENGLISH VERSION	This study has developed and tested several interventions in government health facilities in rural settings with traditional birth attendants, users and local government to improve cultural adaptation of service delivery in health facilities during delivery, and thereby increase humanization of facility birthing for indigenous populations. Results demonstrate that the approach was successful in producing increases in users' satisfaction, at various degrees according to type of change. Data also suggest moderate increases in use of hospitals for delivery care and reductions at home deliveries. These results were reviewed by the government and programmed for national adaptation pending the final report of findings [full report available in Spanish, summary report completed in English]
Russia (Common Agenda/ Mission)	Accessibility of ART in St. Petersburg and Orenburg City, Russia ENGLISH VERSION	This study investigated the barriers preventing HIV-positive persons from accessing specialized medical care, specifically ART, and developed recommendations to increase ART availability and treatment adherence in HIV-positive hard-to-reach ("hidden") patient groups, in St. Petersburg and Orenburg. Structured interviews were held with 551 HIV-positive persons (including injection drug users, commercial sex workers, people living with HIV/AIDS (PLWHA), and PLWHA in self-registration groups) as well as with focus groups and subject experts. [Report in English]
Swaziland (Mission funds)	Intensified TB case finding	This study focused on magnitude and risk factors for TB among PLWHIV and their households. The study was conducted by Women Together, SWANEPHA and HCI in eVembili, a rural constituency. An HIV-positive member of the Women Together PLWHIV group was the index case for whom household members were enrolled. A standard checklist was used to record symptoms and their duration, risk factors, and results from sputum smear and x-ray examinations, with participants being classified as either a TB suspect, case or Not TB. Of the 111 study subjects, 34 (30.6%) were HIV-positive, 20 (18%) were HIV-negative, and 57(51.4%) had unknown HIV status. Sputum samples were requested on all 111 study subjects; however, only 69 cases (62.1%) provided sputum samples. Of the 69 samples, 67 samples were AFB-negative. All 111 subjects were interviewed with the checklist on common TB symptoms and risk factors. The most common TB symptom reported by study participants was noticeable weight loss (reported by 37.4% of subjects), followed by persistent cough (over two weeks) (reported by 36.9%), night sweats (reported by 36.9%), malaise (30.6%), fever (27.0%) and loss of appetite (20.7%). The study found that partnerships with local HIV support groups in

Country	Title	Content
		intensified case-finding is an effective strategy to identify TB suspects and TB cases in communities with high TB/HIV co-infection, and recommended active case-finding and household contact tracing should be implemented as a package of care for HIV-positives,
Uganda (Mission)	Assessment of quality of ART services in the private sector	This assessment, using the cohort approach the examination of pre-ART and ART care, covered 30 of the 33 private for profit sites accredited to provide ART in Uganda. Major findings include very poor and inconsistent documentation (patient records were available on only 327 of the 1500 patients identified for chart review), about half of patients receiving care at the first visit according to MOH standards, quality of care declining further with subsequent visits, and inadequate patient retention (only 42% of patients were still in care after 9 months). This study recommended that private-for-profit providers should be regularly supported to measure and report on indicators of patient retention, adherence with standards, and patient outcomes, that they adapt and incorporate elements of the chronic care model, and establish and support quality improvement teams at the site level to make these changes.
Vietnam	Program evaluation of TB-HIV interventions in Thai Binh Province	This evaluation of the program to increase the quality and quantity of TB/HIV detection looked at the capacity of TB/HIV systems; the process of implementation of HCI support at provincial and district level; the linkages developed among different stakeholders; and the impact of the interventions on the coverage and quality of TB and HIV services. Data was collected through review of epidemiological data to provide pre- and post-intervention results on specific indicators; interviews with key informants from the National TB Program, the Thai Binh Provincial Health Services, TB hospital, the HIV/AIDS Center, and the TB/HIV coordination committee; observation of the use of instruments and equipment provided by QAP/HCI at TB hospitals and at the district level; and in-depth discussions with heads of private clinics in Thai Binh City. The proportion of TB patients receiving HIV counseling increased remarkably, from 47% to 99%, while the HIV testing rate among TB patients increased from 38% to 90%. TB screening was provided to 563 people with HIV during the project period, yielding TB diagnosis in 16% of screened people. With these improvements, the case detection of TB/HIV increased considerably: 33 patients in 2006, 66 in 2007, and 77 in the first three quarters of 2009. The TB notification rate increased from 93 per 100,000 population in 2006 to 97 in 2007 and is projected to increase to 104 in 2008. These figures translate to an annual increase of 4.6% in 2007 and 11.7% in 2008.

Table 9. Research and evaluation studies ongoing in Year Two (FY09)

Country	Title	Content
Ongoing Studies		
Benin (MNCH Core)	Evaluation of impact of community intervention on mothers' knowledge on EONC	This pre-post intervention-control group study examined the impact of a community IEC activity on mothers' knowledge on key EONC messages. The intervention included group health education sessions through women's credit associations using counseling cards. Based on a sample of 51 women in the intervention group and 47 in the control group, Preliminary analysis pof results indicates that women who attended sessions had significantly more knowledge than the control groups for how to stay healthy in pregnancy, how to prepare a birth plan, and post-partum and newborn danger signs. [Final write-up on results will be included in the Benin QI Documentation report which will be will prepared in FY 2010]
Ecuador (MNCH	Validity of self-assessments in	This study measured the validity of QI teams' self-assessment of their performance (compliance with standards assessed through their own review of patient records)

Country	Title	Content
Core)	EOC collaboratives	in comparison with external assessments by expert clinicians done on the same patient records. Data were collected from a sample of 12 hospitals covering records for 1,875 deliveries. Initial analysis examined kappa statistics, agreement rates with confidence intervals and "p" values), and found that agreement rates varied from 72% for IMCI to 95% for use of the partograph. Kappa statistics registered moderate to strong agreement for all but IMCI. Additional analysis is currently being run to better understand factors that affect (or not) the validity of self-assessment data, including training, type of sub-task, etc. Further analyses and writing of the final report will be done during FY2010.
Ecuador (Common Agenda)	Spread of EONC practices and QI	This study includes both a descriptive and analytical component, and focuses on the spread strategy currently being implemented by the Ministry of Health in Ecuador to spread the better care practices (evidence based norms and organizational changes) emerging from the EONC demonstration collaborative. The study will describe the preparation and implementation of the spread strategy for 55 hospitals in 5 priority provinces. Using several rounds of data collection, this study will examine how well new facility-based teams, supported by provincial spread teams, are able to monitor indicators of quality, and implement changes in their process to ensure compliance with standards in order to achieve effective EONC services. Data collection will continue through June-July 2010, and a final report will be completed by September 2010.
Ethiopia (OVC)	Applying the Science of Improvement to Achieving Quality Care for Orphans and Vulnerable Children in Ethiopia	This case study focuses on the application of modern quality improvement (or the science of improvement) to the piloting of standards for services for orphans and vulnerable children. QI teams were formed within community-based organizations to identify gaps in quality, select measures of success, and find local solutions to fill the gaps. Teams then met periodically to share what they were learning. While tools and processes were simplified for the community level application, the QI methods were well appreciated and led to improvements in care provided and outcomes achieved in the children.
Honduras (Mission)	Institutionalization of Better Care Practices and Continuous Quality Improvement in Demonstration and Replication Regions of Honduras	This study began its design in FY 2009 but due to travel restrictions, was postponed until FY 2010. The study seeks to assess the level of institutionalization of CQI and better care practices in the a sample of sites in the 5 demonstration regions where QAP/HCI has been working since 2004 and in a sample of sites in the 6 replication regions where the Ministry of Health implemented a similar package. The findings of this study will be used to determine further actions needed to strengthen institutionalization, as well as identify key strategies for facilitating institutionalization as part of the spread process to the additional 9 regions (tentatively set for Spring 2010).
Malawi (MNCH Core funds)	Impact of Emergency Triage, Assessment and Treatment (ETAT) on the quality of care given to under five children in 3 districts in the southern region of Malawi	This retrospective study describes the extent to which ETAT guidelines and protocols have been implemented in the 3 selected hospitals. One year's worth of patient files and OPD registers (January-December 2007) in the OPDs from 1st January and 31st December 2007 were reviewed, as well as collection of cross-sectional data on availability of key inputs (trained staff, drugs and materials). Three years after introduction of emergency triage, assessment and treatment in 2004 (with support from QAP III), it is still being implemented in these three district hospitals, although there are some areas needing strengthening: use of critical care pathways was only at 57%, only one hospital has all required drugs and equipment in the emergency trays, and only 2% of indicated lumbar punctures were actually done. However, 92% of priority 1 patients and 76% of priority 2 patients were correctly triaged.

Country	Title	Content
Nicaragua (Mission/ Common Agenda)	Evaluation of cost-effectiveness of PHI interventions	This study, which is still in its pilot phase, will examine the effectiveness of pediatric hospital improvement (PHI) initiatives , as measured by the impact on days of hospitalization, rational use of pharmaceuticals, and changes in readmissions for cases of diarrhea and pneumonia in two areas, each with 7 hospitals. The study involves retrospective analysis of clinical and pharmaceutical records; URC has data from 2005 to the present, using a pre-post design for 14 participating hospitals , with a sample of 2,800 cases (1,400 pre and 1,400 post), pending any changes emerging from pre-testing of instruments and procedures.
Niger (MNCH Core)	Evaluate PHI Malaria collaborative	This study examined the effect of a multi-faceted quality improvement intervention on quality of malaria and pneumonia care in children ages 0-5 years in Nigerien public district hospitals, using a case-control pre and post intervention observational design. Preliminary analyses (bi-variate) indicate significant improvements in the intervention group for assessment standards, as compared to the control group. However, fewer improvements were seen in diagnosis and treatment. It should be noted that clustering of cases within a few providers may influence final results. Final report expected in FY 2010.
Niger (HIV Core)	Assessment of Health Workforce Practice, QI and Employee Engagement	This baseline study examined performance management practices at all levels of the health care system in Niger (clear expectations, skills development, feedback, fair evaluation, reward and consequence, professional development). It also measured key results related to the performance management cycle: employee engagement, productivity, and retention. Productivity was measured through provider time use analysis and through examination of patient flow (for contact and waiting times). The results of this baseline study were used to develop improvement objectives for a human resource collaborative operating in the Tahoua region with 16 facilities. Final report expected in FY 2010.
Niger (Common Agenda)	Institutionali-zation of EONC Better Care Practices and QI	The baseline for this study examined the extent of institutionalization of QI and better care practices from the EONC collaborative, and factors that facilitated or hindered institutionalization at site, district, regional and national levels. Findings were used to develop an "institutionalization change package" to be implemented by the Ministry of Health during 2010. Findings from the baseline study indicated that although the level of quality of care and QI implementation remain near to levels during the collaborative, many of the inputs needed to maintain these results are precarious – large staff turnover, little support being offered from district level, etc. These factors, among others, have become the focus of the change package, which contains a list a suggested ideas to assure key elements for quality of care and use of QI methods at site level, to reinforce technical and organizational capacity of district and regional health managers to support QI activities, and to create an enabling environment (policy and strategies) for QI implementation at all levels of the health system. A follow-up assessment is scheduled for May/June 2010 to measure the effects of the change package.
Russia (Mission)	Perceptions of Task-shifting related to care of HIV-positive patients in St. Petersburg	This study seeks to assess the positive and negative effects of the City Health Committee of St. Petersburg's directive that allows HIV positive patients to receive their medical follow-up (including TB screening), not only at the City AIDS Center, but also at local polyclinics. This shift of care (from AIDS specialists to Infectious Disease Specialists) was tested in Krasnogvardeisky district and subsequently scaled up to over 100 facilities in 18 districts. In October 2007, the City's Health Committee of St. Petersburg issued a Decision N201-r to allow HIV positive patients to receive their medical follow-up (including screening for TB), not only at the City's AIDS Center, but also at local polyclinics. The study will examine the effects of this shift on workload, productivity, patient perceptions of quality of care, convenience, confidentiality, provider experience, and service utilization. Interviews will be conducted in 10 districts and include interviews with about 80 providers and 150 HIV-positive patients, complemented by focus group discussions with providers and 15 leaders. Data collection is expected in early FY10.

Country	Title	Content
Tanzania (Mission/ HIV Core)	Sequential validity of self-assessment for ART-PMTCT Services	This is a study of the validity of the QI Teams' self-assessment of their own performance as part of the ART/PMTCT improvement collaborative in Mtwara region, considering all the steps in the self-assessment process. Data collection began in August 2009 with baseline data collection by new QI teams as part of their QI work. Four rounds of data collection will evaluate improvements in: completeness of case recording, record storage and retrieval, sample selection for abstraction, abstraction, summary, and communication of findings. Analysis will explore how validity of self-assessment data may improve over time.
Tanzania (MNCH Core)	Maternal health services evaluation for ECSA*	Similar to the study in Kenya under QAP III, this study examined the competency (knowledge and skills) of skilled birth attendants in Tanzania. Preliminary findings indicate knowledge at moderate levels (average 56%); as well as some skills (active management of the third stage of labor (55%) and manual removal of the placenta (55%). Key weak areas included immediate newborn care (36%) and neonatal resuscitation (25%), and organization and sustainability of referral/counter-referral systems and use of maternal and neonatal health standards were weak. [Report will be finalized in FY 2010].
Tanzania (Mission)	Evaluation of Referral Networks and Linkages between Health Facilities and Communities for HIV/AIDS Care, Treatment and Support in Kibaha District, Coast Region - Tanzania	This descriptive study examined the linkages between health facilities and communities for HIV/AIDS care, treatment and support in one district of Tanzania, with the goal of identifying strengths to build on and areas for improvement. The study used individual and group interviews with providers at various levels of the system, local non-governmental organizations, associations of people living with HIV/AIDS, and other community groups Findings showed that linkages and referral systems within and between HIV/AIDS care institutions in Kibaha district, however, a number of gaps exist in the continuum of care. Among them are; the use of none standardized tools, lack of referral guidelines in some institutions and lack of linkages to other non medical services and clients. The referral systems are in place but with inadequate feed back mechanisms. At the community level, the community leaders and community health workers lack the knowledge of the referral mechanisms. All in all the system is viable, but needs improvements. Recommendations include decentralizing care to dispensary level to reduce referral and transport costs to patients, strengthen referral processes and standardize tools, and increase collaboration with people living with HIV/AIDS and local non-governmental and community based organizations. Draft report currently under review. Final report in Y10
Tanzania (Mission)	Pediatric HIV screening algorithm validation	This study tested the effectiveness of an algorithm for identifying HIV infection in pediatric patients (without blood testing) that WHO has shown to be efficacious. The study tested this algorithm in field conditions in Tanzania in the hands Clinical Officers (non-physicians) who are most frequently diagnosing children with serious illness including HIV/AIDS. Initial results showed a false positive rate of around 50%. This led to a follow-up study of false negatives (done with a smaller sample) which yielded a false negative rate of around 7%. Key findings Given the high societal cost associated with the high false negative rate of the algorithm (7% of children with HIV who would not be treated using this screening mechanism), and the unexpected surge in availability of lab testing facilities in Tanzania (which would enable blood testing for HIV throughout the country in the relatively near future), the recommendation is NOT to adopt the algorithm for routine use but make it available to clinicians to use if they want before lab testing facilities are available in their area , but taking into account that the algorithm has a significant false negative rate so they may still want to send in blood to a distant facility for confirmation. When the HIV DNA PCR test or other confirmatory tests are universally available in Tanzania, there will be no need for the clinical algorithm. [Report expected FY 2010]

Country	Title	Content
Tanzania (HIV Core)	Effectiveness of PMTCT Counselor Training Program	This study will evaluate whether a PMTCT Infant Feeding Counseling Program that includes training of counselors, facility supervisors and facility staff, counselor job aids, and mother take-home brochures was fully implemented in program facilities and yields healthier, better nourished infants at 6 months of age than a PMTCT program without it, comparing program exposure, nutritional status and heath history of 190 infants at 6 months of age from 4 intervention facilities and 4 matched control sites. Home visits using in-depth, semi-structured interviews, weight measurement and direct observation were done with 190 mothers (and their chidren) who received PMTCT antenatal counseling at one of the 8 study facilities and who recently delivered. Program exposure was measured by the mother's report of receiving a take-home brochure at the antenatal counseling session; health history in terms of infants' infectious disease episodes from birth to six months, and nutritional status based on weight-for age at 6 months adjusted for birthweight. Data were collected as part of another study, but the training evaluation component of the study will involve entering, cleaning, and analyzing it to determine if the hypotheses are correct. During FY 2009, the data was entered and partially cleaned, with preliminary indications of significant missing data. [Final report expected in FY 2010]
Uganda (HIV Core)	Effectiveness of an ART Training Program	This study is evaluating if and how an in-service, multi-component program of health record personnel training and standardized patient cards and registers results in better patient records at trainee facilities one month after the training. The study sample includes 40 trainees from 15 health facilities and district offices. Measurements of health record quality (completeness, correctness) of health records for ART patients used a pre-coded data collection form for patient records done pre-training and compared to records done 1-month post-training by individual trainee and site, to measure knowledge imparted by the training. In addition in-depth interviews with key informants were used to assess confounding factors that may have helped or hindered the quality of the patient records other than the training and new standardized cards and registers. This study will give the same knowledge test to comparable individuals to those receiving the training as a control group. In FY 2009, the study sample selected, the two week training session observed, and record review/interview data collection instruments developed and tested. Pre-training data collected at the start of the training session. Post data collection scheduled for November 2009. [Final report expected in FY 2010.]
Uganda (HIV Core)	Effectiveness of an HIV Patient Monitoring Training Program	This study is evaluating if and how an in-service 2-week training of clinical nurses on ART care based on WHO guidelines and curricula results in better ART care A sample of 18 nurses who attended the training and whose facilities are pre-certified to provide ART care have been selected and will be measured during site visits. The competence and performance of the sample nurse-clinicians will be measured using a scenario test and record reviews of selected considerations. In addition, in-depth interviews will be held with key informants at each site to assess confounding factors that may have helped or hindered performance. In FY 2009, the study sample selected, the training session observed, and record review/interview data collection instruments developed and tested. Pre and post data collection scheduled for October 2009. [Final report expected in FY 2010.]
Uganda (Mission funds)	Self-Assessment Data Validity	This study examines the validity of self-assessment data in a sample of 36 facilities (of the original 120 sites) in order to make improvements. Data were collected in August 2009, through interviews on the data recording, compiling, validation, interpretation, and through external audit of records for the same month. Final report expected in FY 2010.
Global (Common Agenda)	Evaluation of the Standard Evaluation System's Tools	This evaluation completes the testing of the Standard Evaluation System QI team tools introduced in 6 countries in the Summer 2008: Benin, Honduras, Niger, Russia, Tanzania, and Uganda. Endline data were collected in the Summer 2009, including qualitative interviews with QI teams, coaches and collaborative managers,

Country	Title	Content
	at QI Team Level in Six Countries	and quantitative opinion surveys (QI teams and coaches) and performance scoring of QI documentation, analysis and sharing activities. Final report will be available in the 3rd quarter 2010.
Global (Common Agenda)	Options for Spread of Simple, High-Impact Interventions	This paper outlines methods and approaches for scale-up of simple, high impact interventions that are effective and efficient, based on experiences in QAP, HCI, and in the United States and other countries. The report was requested by the World Health Organization in an effort to technically explain spread methods for use with medical checklists. It contains multiple case studies of HCI work related to spread and scale up.
Global (Common Agenda)	Sample Size Determination for Time-Series Charts for Quality Improvement	This paper develops a methodology for determining sample sizes for time series charts using repeated measures statistical determination. It lays out the rationale for sampling over time, and provides tables for determining sample size within the frame of time-series charts with varying months of pre and post intervention data. .

Table 10. Research and evaluation studies dropped or cancelled in FY09

Country	Title	Content
Studies dropped or not completed		
Benin (MNCH Core)	Validation of quality indicators for EONC	This study compared mothers' report of services to what was recorded on the partograph related to examination of the mother and newborn, counseling, checking for breastfeeding and birth registered. Preliminary results indicate lack of concordance for examination of mothers and newborns (concordance of about 65%) while counseling and other tasks had concordance rates of over 85%). However, the data are no longer available for further analysis.
Nicaragua (Mission funds)	Effectiveness of interventions to improve skill birth attendant competency	This study was planned to follow up on the 2005 assessment. However, it has been dropped from the FY 2010 URC Nicaragua budget and program, but may be included in a later year program.
Tanzania (HIV Core)	Assessment of quality of laboratory services	A preliminary assessment of the quality of HIV laboratory services in the Tanga Region of Tanzania, which resulted in development of lab-specific indicators and recommendations for improvements. No formal report was written on this assessment but results are being used to make improvements.
Uganda (HIV core & Mission funds)	Assessment of ART services	Informal assessment of the quality of ART and pre-ART care in eight sites in Uganda, using a cohort approach, which served only as a pilot of the assessment methodology which has since been applied in larger assessments in the Uganda private for profit sector and the Cote d'Ivoire assessment. No full report prepared.
Uganda (Mission)	Assessment of Patient Triage Systems	*Preliminary data analyses lead to conclusion that more data would need to be collected to draw any conclusions. Study was dropped at this time*
Uganda (Mission funds)	Institutionalization in Graduated Sites	This study was initiated to measure on-going QI activities in "graduated sites" in Uganda. However, further QI plans now include involving these same sites in new collaboratives on coverage, retention, outcomes. Thus, this study is dropped.
Uganda (Mission funds)	Impact of Tested Changes on Quality of Integrated HIV/Family Planning Services	This study was initiated in FY 2009, but the data, compiled retrospectively from coaching reports, was not specific enough to proceed with the analysis. However, the preliminary analysis has allowed development of methods for future analyses on future data sets.

Uganda (Mission funds)	Pediatric Testing – Quality of CD4 Testing	This study was incorrectly put on the list. No such study exists.

Table 11. Research and evaluation studies that will start in FY10

Country	Title	Content
Studies moved to FY10		
Guatemala (Mission)	Evaluating a system for incentives to TBAs for referrals of obstetric complications to health facilities	The ProCONE strategy being implemented by the Guatemala Ministry of Public Health and Social Action, and the HCI supported ProCONE collaborative promotes quality obstetric and neonatal care, and includes components in communities, essential care for normal deliveries and newborn care, and for complications. To increase the rate of TBA referrals of potentially complicated cases to appropriate health facilities, this "case-control" study will measure the effect of monetary and non-monetary incentives to TBAs and community committees for referrals of potential complications to appropriate facilities, compared to no incentives.
Nicaragua (Mission funds)	Evaluating institutionalization of quality improvement in ProMujer	ProMujer, a community NGO providing micro-credit and health services to 31,000 poor women in Nicaragua, has attempted to implement a QI approach, and make it a permanent part of its processes, throughout the organization in all its activities that builds on the successful QI program that QAP helped to install in its women's health program over a year ago. This study will evaluate if that it is the case. The study will document the process by which QI was implemented with ProMujer, including awareness, skill building and support for updated quality standards and protocols, improved tools for clinical training, monitoring and quality improvement, types and characteristics of the success ProMujer achieved, and lessons learned. In light of these findings, the study will probe whether and how quality management mechanisms were incorporated into ProMujer's ongoing operations. Specific indicators, data collection procedures and sample selection, such as in-depth interviews with key informants and review of organizational records, are being developed with ProMujer.

Research related to HIV/AIDS

Key contributions to the HIV/AIDS agenda focused on the evaluation component of HIV training programs (the HIV/AIDS section 3.2 has details). This activity seeks to assess the effect of training programs on HIV-related practices over time, with the goal of learning for improvement. The fast-turnaround evaluations are collaborative efforts of HCI staff and training program implementers designed to provide results that training program implementers can use quickly to modify and improve their programs. Key activities in FY09 and to be completed in FY10 include a literature search related to methods used to evaluate training programs and evaluations of training programs on: 1) ART patient monitoring in Uganda, 2) ART care for clinical nurses in Uganda, and 4) PMTCT infant-feeding counseling in Tanzania.

Research related to MNCH

MNCH research support focused mainly on the job aids/task shifting study related to maternal and newborn health in Benin. This pre-post intervention trial evaluated the quality and impact of counseling on maternal and newborn care by skilled and unskilled health care workers in 14 facilities in Zou/ Collines. Results indicate that the quality of counseling by nurse-midwives and mothers' knowledge improved significantly with a job aid-focused intervention, particularly related to birth preparedness, danger sign recognition, newborn care, and home practices. Task shifting to less-skilled lay nurse aides resulted in similar improvements in counseling with significantly higher levels of maternal knowledge. The job aids were found to be acceptable and consistent with existing practices, and delegation of tasks

to the less-skilled cadre was shown to improve care. The results were fed back to local project and facility staff, and the job aids and task shifting have been expanded to another 32 sites (so far). Two draft journal articles are under project review.

Research support to Mali was delayed until mission approval came in late FY09. The R&E Unit has provided technical support to the Mali team in the development of baseline data collection and measurement systems. Planned work for Bangladesh was halted due to lack of mission concurrence.

Research related to health workforce development

The R&E Unit provided technical support to the Health Workforce Development group in the design and analysis of baseline data for the HR collaborative in Niger and further factor analysis on the employee engagement tools (the Health Workforce Development section 4.2 has details).

Evaluation of the evidence on effectiveness of collaborative improvement

The R&E and Knowledge Management units collaborated to analyze 135 time series charts from 27 collaboratives operating in 1998–2008 to assess the level or degree of improvement in quality of care and outcomes, the speed of improvement, and maintenance of improvements over time. A report includes an appendix of all 135 time series charts and provides the first such analysis of results across collaboratives and indicators. The final version will be ready in early FY10.

Directions for FY10

In FY 2010 under TO1, HCI R&E and country program staff will focus on research related spread, cost-effectiveness, and institutionalization. Under HCI Task Order 3, R&E will finalize the testing of the SES; support country-initiated research on spread, community QI, cost-effectiveness, and institutionalization; and develop and test tools and approaches for synthesis and consolidation of learning from a collaborative. We will leverage tools and approaches from studies on spread and institutionalization initiated in FY09 under TO1 to develop additional learning in other country contexts.

4.5 Technical Leadership and Communication

Overview of HCI's Activities in FY09

What we are trying to accomplish (global)	How and with whom
Provide technical leadership for USAID's worldwide efforts to improve health care in developing countries	Collaborate on significant new initiatives in health care improvement
Seek guidance from expert leaders in QI on overall project technical direction and encourage cutting-edge innovation	Convene a Technical Advisory Group for the project
Facilitate the use of QI as an integral part of health services delivery by international organizations; expand awareness and the use of modern QI approaches in USAID-assisted health care systems	Engage cooperating agencies and implementing partners in the application of QI approaches through direct assistance, joint activities, briefings, and presentations Present at international and regional conferences and technical meetings to program managers and policymakers
Develop and disseminate evidence of the effectiveness of applying modern QI approaches in USAID-assisted health care systems	Write and publish technical reports and publish articles in peer-reviewed journals

Expand awareness of and demand for QI among civil society and the general population	Facilitate articles and broadcasts in mass media that describe QI activities and results
Develop QI capacity in the next generation of health care providers and help standardize the teaching of modern QI approaches	Support the development of training programs in QI in low- and middle-income countries

Main Activities and Results

Provide global technical leadership for USAID's worldwide efforts to improve health care

HCI contributed to a number of international expert technical meetings convened by WHO and other international bodies this year. Drs. David Nicholas and Maina Boucar presented in October 2008 at a meeting of international donors and technical leaders sponsored by the Rockefeller Foundation and the Institute for Healthcare Improvement (IHI) in Bellagio. They addressed the need for an international framework and methodology for accelerating efforts to address the quality of health care in developing nations. Also in October, Dr. Oscar Nuñez shared HCI's experience with reducing the time and costs of IMCI training at a workshop convened by WHO's Child and Adolescent Health Division to review experiences with IMCI training and make recommendations on reducing the classroom time. Dr. M. Rashad Massoud presented on the application of improvement methods to integrate nutritional services into clinical management of HIV/AIDS at a WHO Regional Consultation on nutrition and HIV/AIDS in French-speaking African countries, held in November in Burkina Faso. Dr. Massoud also presented on linking quality improvement with Pay for Performance at a workshop convened by the World Bank and USAID's Health Systems 2020 Project in Indonesia in January 2009 and met again with World Bank staff in February to discuss the topic in more detail. In July 2009, Ms. Lauren Crigler was asked by WHO's Global Health Workforce Alliance to join a technical reference group on community health workers (CHWs) and advise on the development of a guide for the training, supervision, and deployment of these personnel.

At the request of Harvard University Medical School and WHO, Dr. Massoud and Ms. Katlyn Donohue began writing a paper on options for large-scale spread of care checklists. Harvard University Medical School and WHO had developed a surgical checklist as a component of the WHO Safe Surgery Saves Lives initiative, which had proven to be a life-safe job aid. WHO recommends its global adoption. In its paper, HCI explores creating a framework for spread and factors that influence it and examines effective examples of positive behavior change at hospitals, including a brief case study on the Kaiser Permanente Nurse Knowledge Exchange, which was developed with IHI. HCI's successful work in implementing AMTSL in Niger as well as improving the care of neonates with RDS in Russia, positive examples of health care spread efforts, are also described. HCI will continue to offer technical assistance in developing the plan for spread of the surgical and other checklists from Harvard and the WHO.

The project also took several steps this year to foster more-advanced QI skills among HCI field and headquarters staff. In February 2009, Dr. Massoud led a seminar at URC on the Science of Improvement, covering the principles and methods of health care improvement, adaptations to the improvement collaborative methodology, and spreading improvement. Attending were HCI's Chief Party in Cote d'Ivoire, Dr. Jean Nguessan; the HCI Chief of Party in Tanzania, Dr. Davis Rumisha; and HCI headquarters staff. In July, six HCI technical staff— Drs. Maina Boucar, Stephen Hobokela, Ibrahim Maroof, Farid Sohail, Youssef Tawfik, and Jorge Hermida—began IHI's nine-month Improvement Advisor course. The course's first face-to-face session was held in Ghana.

Convene the Technical Advisor Group for the HCI Project

Leading health care improvement experts gathered at USAID in Washington, DC, May 18, 2009, to serve as the Technical Advisory Group (TAG) for the HCI Project, reviewing HCI's progress to date

and providing guidance for the second half of the task order. Members are: Bruce Agins, MD, MPH, Medical Director, New York State Department of Health AIDS Institute; Katie Coleman, MSPH, Research Associate, MacColl Institute for Healthcare Innovation; Göran Henriks, MA, Chief of Learning and Innovation, Qulturum, Jönköping County Council, Sweden; Gregg S. Meyer, MD, MS, Senior Vice President, Center for Quality and Safety, Massachusetts General Hospital; Lloyd Provost, MS, Senior Fellow, IHI; and David M. Stevens, MD, Director for the Quality Center and Associate Medical Director of the National Association of Community Health Centers.

The panelists were welcomed by Ms. Gloria Steele, Acting Administrator for Global Health at USAID, and Ms. Barbara Turner, President, URC. Dr. James Heiby, USAID CTO for the HCI Project, began the meeting with a brief review of the evolution of USAID's program in quality improvement that has culminated in the Health Care Improvement Project. HCI Director Dr. M. Rashad Massoud followed with a brief overview of the project's objectives and key activities.

The remainder of the meeting addressed five topic areas critical to fulfillment of the statement of work: strengthening health systems, health workforce development, spread and institutionalization, quality improvement methods, and global learning/knowledge management. To frame the discussion, HCI staff opened each topic with brief presentations on project strategies and results and then posed a question to the TAG panelists. Box 5 summarizes TAG recommendations for HCI as the project moves forward.

Facilitate the endorsement of QI as an integral part of health services delivery and expand awareness and use of modern QI approaches

HCI staff participated on the program of 15 international, regional, and national conferences in FY09, making 32 presentations (Table 12).

HCI staff led a one-day workshop at the Global Health Council Annual Conference, explaining basic QI methods to approximately 100 participants and enabling them to design an improvement project that they could implement immediately upon return to their respective organizations. The workshop was designed around a new workbook developed by Mr. Shawn Dick and Mr. Simon Hiltebeitel. The workbook drew mainly from the *Modern Paradigm* monograph, but also relied on existing course materials and other training designs from the Quality Assurance Project. The design divided the four key components of QI, as set out in the monograph, into eight brief modules, each consisting of a section on concepts, a case study with example worksheet, and a blank worksheet, for participants to complete, presenting an exercise. HCI intends to develop the workbook further with additional case studies for HIV/AIDS, OVC, IMCI, TB, and other technical areas.

HCI staff also participated in regional conferences that brought together key MOH officials and representatives of health sector stakeholders to present the rationale for investing in improvement activities to expand the use of evidence-based care practices and raise service quality: one in Arusha (Forum on Best Practices in Health Care and Directors' Joint Consultative Committee of the East, Central and Southern African Health Community) and the other in Lima (Advancing Newborn Health through Alliances).

Box 5. Technical Advisory Group recommendations, May 2009

TAG Recommendations on Topic #1: Health systems strengthening

Design care for chronic diseases to offer patients pre-packaged bundles of self-care interventions.

Other elements of the Chronic Care Model that you should build in are clinical information systems.

Align measures of improvement across all levels of the health system and with the information system, and build in ways to allow all levels to hold each other accountable.

Make it explicit who is tasked with measuring and reporting on quality on an ongoing basis.

Engage civil society actors and patients in improvement; while this is the hardest to achieve, it provides the biggest returns.

TAG Recommendations on Topic #2: Health workforce development

If high turnover of staff is inevitable, plan for it. Identify professional development incentives for staff.

Measure patient experience—it is an important outcome measure for staff satisfaction.

The ability to receive feedback is an important skill to learn; improvement efforts should prepare staff for giving and receiving feedback.

TAG Recommendations on Topic #3: Spread and institutionalization

Demonstrate the business case for QI: Design deliberate communication strategies to share what works and to convince stakeholders in new places what could work for them.

Continue to build the evidence base for improvement methods.

Create standards and expectations for each level of the health system and define what capacity building is needed to support these roles.

Each project activity should have spread and institutionalization built into it and a strategy for addressing the interests of various stakeholders.

When moving to spread, keep in mind that instead of just focusing on spreading methods and tools, the key components for sustained improvement are relationship building, communication and coaching. In addition to sharing the tools that come out of the initial collaborative, HCI needs to find ways to institutionalize the idea behind "learning sessions" to create mechanisms for ongoing learning and sharing. Tools also need to be integrated into the health system so that they become a permanent part of the way things are done.

TAG Recommendations on Topic #4: New directions in quality improvement

Make greater use of positive deviance analysis—when things go really well, look in depth at the positive outliers to better understand why things went incredibly well. Also, look deeper when things didn't work well to understand why not and what can be learned from that.

Build in how you're going to learn, so when adverse events occur, you'll have a way to review that. Build in a system to learn from failures.

Apply the collaborative approach to address other environmental factors that cause underperformance, such as leadership and fiscal issues.

Use patient safety as a lever and a wedge issue into QI. Measure safety awareness in the country before beginning the work—document how comfortable people are speaking up, etc. and measure progress in this awareness as a result of QI activities.

Look at other QI methodologies, like "lean process improvement," which is trying to systematically take waste out of processes.

Develop measures that show how well the continuum of care is working, as a whole.

TAG Recommendations on Topic #5: Partnerships for global learning

"Steal shamelessly; share senselessly."

Develop social networking features to help people identify and connect with QI practitioners or groups in their area.

Stay in a learning mode, and don't forget the importance of creativity and its role in QI.

Website can be a way to reach patients to find out more about the patient experience. Connect QI methods to patients and build their capacity (and that of providers) to address patient safety issues. Package QI concepts into materials for consumers, so that patients are more involved in their own health.

Partner with major quality organizations to link them to your website to pull in their communities and explore linking with universities, both in the US and other countries.

Table 12: HCI participation in national, regional, and international conferences, FY09

Defining, Assessing, Assuring, and Improving the Quality of Health Care in Developing Countries (IHI), October 14--16, 2008, Bellagio, Italy	Drs. David Nicholas and Maina Boucar participated in this meeting of donors and key international actors in QI; it was organized by the Rockefeller Foundation and IHI to address the need for an international framework and methodology to ensure that the quality of health care in developing nations receives the attention it needs. HCI presented on its work in Niger and other countries. The meeting was led by Lord Nigel Crisp, formerly Chief Executive of the National Health Service in England; Professor Sheila Leatherman; and Dr. Don Berwick, President of IHI. A meeting outcome was an agreement to share information on HCI's knowledge management system with Sheila Leatherman, who is collating a document on current QI KM initiatives and best practices.
International Union Against Tuberculosis and Lung Diseases, October 16–20, 2008, Paris, France	• Dr. Donna Jacobs-Jokhan made two oral presentations: "Integration of Health Care Improves Continuity of Care and Health Service Outcomes – a South African Experience" and "Quality Improvement in TB/HIV Programs in South Africa in the Face of Severe Human Resource Constraints" • Dr. Jorge Hermida presented a poster: "Improving tuberculosis control in a rural setting in Bolivia through an improvement collaborative approach" • Dr. Victor Boguslavsky presented a poster: "Integrating TB and HIV services into general health care system in Russia" • Dr. Neeraj Kak, Dr. Refiloe Matji, and other URC staff attended.
WHO Regional Consultation on nutrition and HIV/AIDS in French-speaking African countries, November 17–20, 2008, Ouagadougou, Burkina Faso	Dr. Massoud presented "How Modern Improvement Methods Help Integrate Nutrition Assessment, Counseling and Care into Clinical Management of HIV/AIDS Patients."
International Conference on Scaling Up: An Essential Strategy to Attaining Good Health for All, December 3–6, 2008, Rajendrapur, Bangladesh	Mr. Belayet Hossein presented on behalf of HCI at this conference sponsored by the Bangaldeshi NGO BRAC, which funded his travel. His presentation, "Evaluation and Improvement for Scaling Up," described HCI's approach to scaling up through collaboratives and shared results from large scale spread in Niger, Ecuador, and Uganda.
National Forum on Quality Improvement in Health Care, December 8–11, 2008, Nashville, TN	Dr. Massoud participated in this IHI-sponsored 20th National Forum on Quality Improvement in Healthcare. He delivered jointly with IHI colleagues a Learning Lab on "A New Generation of Ideas on Spread and Sustainability." He also participated on a panel on lessons learned from projects in developing nations.
Asia Pay for Performance Workshop, January 19–23, 2009, Cebu, Philippines	Dr. Massoud attended this workshop sponsored by the Health Systems 2020 Project and the World Bank. He presented on "Incorporating Quality in Pay for Performance" and made arrangements to meet in Washington with World Bank staff interested in linking QI interventions with pay for performance.
MEASURE Evaluation Symposium, January 28–29, 2009, Arusha, Tanzania	Drs. Davis Rumisha and Festus Kalokola presented on "Using Data for Continuous Quality Improvement and Improved ART and PMTCT Outcomes in Tanzania" at a plenary session in this symposium on "From Data to Impact." Dr. Benson Tumwesigye of HCI Uganda presented on experience using data to improve logistics management in the ART Collaborative in Uganda.
Second Mexican Technical Meeting on Maternal Health, San Cristóbal de las Casas, February 12–13, 2009, Chiapas, Mexico	Dr. Hermida participated in this meeting, which focused on the states of Chiapas, Guerrero, and Oaxaca. He presented HCI's experience with humanization and cultural adaptation of delivery care in Ecuador and held meetings with Mexican organizations interested in improving maternal and newborn care, including the Mexican Institute of Public Health.
VI International Conference on QI of Health Care, March 17--18, 2009, Lima, Peru	Dr. Hermida presented HCI's experiences in Latin America implementing improvement collaboratives and linking QI with health sector reform at this conference organized by Peru's MOH.

International Forum on Quality and Safety in Health Care, March 18–20, 2009, Berlin, Germany	Three HCI staff presented: • Dr. Massoud co-led with Mr. Joe McCannon of IHI a mini-course on spread and moderated with Professor John Ovretveit a panel on lessons from QI in less-developed countries. • Drs. Lynne Franco and Victor Boguslavsky presented, respectively, the posters, "Are Collaboratives a Feasible Improvement Strategy for Less Developed Countries?" and "Decentralization of HIV Care in St. Petersburg, Russia."
Global Health Council (GHC), May 25–29, 2009, Washington, DC	• Dr. Massoud and HCI staff led a skill-building workshop "Design Your Improvement Project." • Ms. Marie-Eve Hammink presented, "Care that Counts: Road Map to Quality Improvement for OVC Programs" as part of a panel organized by HCI on "Quality Improvement for OVC Programs: Moving Standards to the Field." • Mr. Samson Haumba presented, "Validating TB Symptom screening in Swaziland among PLWHA." • HCI consultant Dang Hung presented, "Improving Case Detection of HIV/TB in Vietnam."
HIV/AIDS Implementers' Meeting, June 10–14, 2009, Windhoek, Namibia	• Ms. Donna Jacobs-Jokhan presented, "Facilitating Linkages between Community-based Resources and Health Care Facilities: An Innovative Approach to Improve the Quality of Care for PLWHA." • Mr. Haumba presented the poster "Identifying TB Subjects among PLWHIV and Their Household Members: Experiences with Civil Society Partnerships in Swaziland." • Ms. Tatiana Vinogradova from HCI/St. Petersburg presented the poster, "Improving Linkages between Services for Increased Access to Quality HIV Care at a Local Level." • Ms. Albertina Thomas presented the poster, "Nurture the Workforce" on the training being supported in Namibia to improve health worker knowledge and attitudes toward HIV/AIDS.
Regional Forum on Quality of Pediatric HIV and TB Care: Brainstorming Forum, June 28–30, 2009, Nairobi, Kenya	• Dr. Stephen Kinoti made two presentations: "Quality of Pediatric AIDS and TB services in Eastern Africa" and "The USAID Health Care Improvement Project." • Dr. Nigel Livesley also made two: "The Chronic Care Model" and "Attrition in PMTCT and Pediatric HIV programs." • Pankaj Sadaphal made one, "Pediatric TB: Issues for Quality Improvement."
3rd Forum on Best Practices in Health Care Forum and 22nd Directors' Joint Consultative Committee of the East, Central and Southern African Health Community, September14–18, 2009, Arusha, Tanzania	Dr. Kinoti made a technical presentation at the Forum and a policy-oriented keynote to the Directors' on "Improving Access to Quality Health Care to Achieve the Millennium Development Goals."
Technical Forum: Advancing Newborn Health through Alliances, September 15–16, 2009, Lima, Peru	Dr. Hermida represented HCI at this regional experts meeting convened by the LAC Neonatal Health Alliance to bring together obstetrics, pediatrics, and nursing experts to endorse evidence-based practices for immediate newborn care. His plenary presentation was "Measuring and Improving the Implementation of Evidence-Based Practices in Government Health Services in Latin America.

HCI staff conducted several briefings for USAID and cooperating agency staff this year, including the Office of HIV/AIDS Human Resources for Health (HRH) team, the United States Government Technical Working Group for OVC Programs, the Office of the Global AIDS Coordinator, and the USAID Global Health Bureau Health, Infectious Disease and Nutrition and Maternal and Child Health Divisions (Table 13).

Table 13. HCI briefings and presentations for USAID, international donors, and cooperating agencies, FY09

Date/Venue	Presenter(s) and Topic
March 9, 2009, Washington, DC	Dr. Massoud, Ms. Crigler, and Dr. Hill made the presentation "Bridging the Implementation Gap: Delivering High Impact MNCH Interventions at Scale" at USAID for members of the GH/MCH team.
March 24–26, 2009, Pretoria, South Africa	Dr. Troy Jacobs of USAID/GH/MCH presented on the HCI-developed CHW Functionality Matrix at the PEPFAR Human Resources for Health meeting.
May 26, 2009 Washington, DC	HCI staff led a one-day workshop at the Global Health Council Annual Conference, explaining basic QI methodology to approximately 100 participants and enabling them to design an improvement project that they could implement at their own organization. Most participants remained engaged throughout the day and left very positive feedback.
May 27, 2009 Washington, DC	Drs. Massoud and Boguslavsky presented "QAP/HCI Russia, 19982009: From Pilots to System Change" at USAID.
May 27, 2009 Washington, DC	Ms. Margaret Kyenkya and Dr. Livesley presented "Integrating Nutrition into HIV Care: A Quality Improvement Approach" at USAID.
May 28, 2009 Washington, DC	Dr. Rodrigo Bustamante presented "Supporting USAID Objectives in Guatemala through Quality Improvement" at USAID.
July 2009 Washington, DC	Ms. Crigler met with the Office of HIV/AIDS Human Resources for Health team to brief them on the progress of project efforts to apply employee engagement and collaborative improvement to strengthen human resource management.
August 2009 Washington, DC	Ms. Hammink presented the major lessons learned to date in applying QI to OVC programs to the USG Technical Working Group for OVC Programs.
September 2009 Bethesda, MD	Dr. Miriam Othman presented the final results of her internship project to map HCI field activities by Millennium Development Goal (MDG).
September 2009 Washington, DC	Dr. Massoud, Dr. Beth Turesson, Ms. Fazila Shakir, and Dr. Bart Burkhalter presented on HCI HIV/AIDS care and treatment assistance and research to OGAC.

Develop and disseminate evidence of the effectiveness of applying modern QI approaches in USAID-assisted health care systems

During FY09, HCI published 16 technical reports and articles, listed in Table 14, describing QI interventions and their results.

Table 14: Published reports, products, and informational materials, FY09

Journal Articles (Date Published)
Franco LM, B Burkhalter, A de Wagt, L Jennings, AG Kelley, and M-E Hammink. "Evidence base for children affected by HIV and AIDS in low prevalence and concentrated epidemic countries: Applicability to programming guidance from high prevalence countries." *AIDS Care* **21** (S1):4959. (2009)
Technical Reports (Date Published)
Quality Programs for Orphans and Vulnerable Children: A Facilitator's Guide to Establishing Service Standards. Published by the USAID Health Care Improvement Project. Bethesda, MD: University Research Co., LLC. (November 2008)
Dang Viet Hung, Ho Thi Minh Ly, and Nguyen Thi Thu Lien. Expanding TB and TB/HIV Integrated Services in Thai Binh Province, Vietnam. Technical Report. (January 2009)
Rusakova MM, IN Gurvich, AA Yakovleva, EM Vinogradova, VA Odinokova, KY Eritsyan, AF Makhamatova, MA Sidorenko, and NM Marudova. Accessibility of ART in St. Petersburg and Orenburg City, Russia. Research & Evaluation Report. (December 2008)
Kyayise AM, R Kyeyagalire, N Livesley, I Kirunda, B Tumwesigye, S Kinoti, and D Kajungu. Private-for-Profit HIV/AIDS Care in Uganda: An Assessment. Technical Report. (December 2008)
USAID Health Care Improvement Project. Le Collaboratif d'amélioration : une approche pour l'amélioration

rapide des soins de santé et la mise à l'échelle des services de qualité. 2009. Published by the USAID Health Care Improvement Project. Bethesda, MD: University Research Co., LLC (URC). (June 2009)
USAID Health Care Improvement Project. Technical Advisory Group Meeting, Washington, DC, May 18, 2009. Proceedings. (July 2009)
Short Report and Flyers (Date Published)
Quality Improvement in HIV/AIDS Care, Prevention of Mother-to-child Transmission, and Related Services: Collaboration between the Ministry of Health and Social Welfare and USG-supported partners in Tanzania (8-page update) (November 2008)
Le Projet d'Amelioration des Soins de Sante : Ressource de L'USAID (2-page flyer) (October 2008)
Integrating TB and HIV Services in the General Health Care System in Russia (2-page flyer) (October 2008)
Improving Tuberculosis Control in Rural Bolivia (2-page flyer) (October 2008)
Applying Quality Improvement Approaches to Human Resources for Health (2-page flyer) (March 2009)
Collaboratives: A Feasible Improvement Strategy for Less Developed Countries (4-page flyer) (March 2009)
Decentralization of HIV Care in St. Petersburg, Russia (2-page flyer) (March 2009)
Technical Advisory Group Provides Guidance to USAID in Health Care Improvement (June 2009)
Quality Improvement for OVC Services: Changing Youth Participation from a "Token Voice" to a Key Actor (April 2009)

Directions for FY10

HCI will emphasize publishing project results and approaches in peer-reviewed journals and in short informational publications rather than in long technical reports. A major new technical paper will be published summarizing the evidence for improved compliance with standards and health outcomes from an analysis of data from 27 collaboratives implemented in 12 countries. Journal articles will be submitted to peer-reviewed journals on the ART Framework, task-shifting research in Benin, and the analysis of evidence from 27 collaboratives. Priority conferences for presentation of HCI results and approaches in FY09 will be the International Forum on Quality and Safety in Health Care, the Global Health Council annual conference, and the HIV Implementers' Meeting.

5 Performance Tracking Plan

Table 15 summarizes the progress made through the end of FY09 in achieving TO1 performance targets.

Table 15. HCI FY09 cumulative achievements toward TO1 performance targets

HCI TO1 Performance Target	Cumulative Progress Toward Achievement of Performance Targets at the End of FY09
Objective 1: 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	
Performance target 1.1: 100% of QI interventions are documented in a consistent format which includes description of the intervention and quantitative measures of the success of the intervention over a defined time period, including a baseline measure.	▪ The major QI interventions being supported by HCI at the country level were defined ▪ A standard template addressing all elements that should be included in the documentation of each major QI intervention was developed ▪ All HCI country team leaders were briefed on the QI documentation requirements in May 2009 at the HCI mid-term review meeting ▪ A system for archiving information on QI documentation was created; the system will be managed by the HCI knowledge management team, which will use the information to generate collaborative profiles and improvement reports for posting on the HCI Portal ▪ Data gathering and archiving has begun for all QI interventions

Objective 2: Institutionalize modern quality improvement approaches as an integral part of health care in USAID-assisted countries	
Performance target 2.1: Of health systems receiving technical assistance under task order #1 for more than 12 months, 75% have documented implementation of QI interventions independent of contractor assistance.	▪ The R&E team developed a concept note to guide research on institutionalization that include ideas for measuring QI interventions that have been implemented independent of HCI assistance; guidance is now being developed on how to measure institutionalization (i.e., what kinds of activities should be occurring to ensure quality care to all clients all the time) ▪ HCI initiated a major research study on institutionalization of QI and better care practices in Niger in FY09; the study will inform approaches to measurement of institutionalization implemented in FY10 ▪ HCI country teams all began reporting on evidence of institutionalization as part of FY09 annual reporting; this evidence is catalogued in the FY09 HCI TO1Self Evaluation Report
Objective 3: Expand the evidence base for the application of QI to human resources (HR) planning and management	
Performance Target 3.1: In at least two African countries, develop improvement collaboratives on HR management processes, including quantitative improvement goals, and achieving an average improvement over baseline performance of at least 10%	▪ A collaborative on HR management at the regional and district levels was launched in Niger in FY09; this has evolved into two collaboratives: one on facility level HR management and the other on district level HR management ▪ A collaborative in district health management was launched in Uganda in FY09 ▪ Both the Niger and Uganda HR collaboratives are measuring quantitative indicators of improvement in both management and service delivery processes ▪ Planning began for a third HR collaborative in Tanzania in FY10
Performance Target 3.2: Develop and evaluate 15 applications of QI methods to HR policy issues, of which at least three directly address the efficiency of health care processes or the productivity of providers.	▪ Ten applications of QI methods to HR policy issues have been completed of the end of FY09; documentation of these applications is in progress. Two of the 10 address efficiency and productivity. The 10 applications are: 1) Aligned goals and objectives in Niger 2) Written job descriptions in Niger 3) Employee engagement in Ethiopia OVC volunteers 4) Employee Engagement in Niger 5) Assessment of productivity in Niger 6) Client flow analysis in Niger 7) Nicaragua – Organizational Climate Assessment 8) Improving community health worker use of malaria rapid diagnostics in Zambia 9) Tested CHW tool in Nepal 10) Developed CHW Assessment tool and process to evaluate and count functional CHWs ▪ Another six applications were initiated or planned for implementation in FY10
Objective 4: Expand experience with the improvement collaborative approach in USAID-assisted countries	
Performance Target 4.1: Support the development of 7 phase I improvement collaboratives, ,including improvement goals expressed as quantitative indicators, and achieving an average improvement over baseline performance of at least 10%	▪ Thirty-two new phase I improvement collaboratives have been launched through the end of FY09 and planning took place for the launch early in FY10 of two more phase I improvement collaboratives ▪ As part of the project's documentation of QI interventions, baseline indicators and improvement achieved through the end of FY09 for these collaboratives are included in the FY09 Self Evaluation Report

within 18 months after the beginning of the collaborative. Collaboratives with specified topics listed elsewhere in this statement of work contribute to the achievement of this target.	
Performance Target 4.1a: Support the development of at least one phase I improvement collaborative addressing district level health program management in Africa.	▪ Two phase I improvement collaboratives addressing district level health program management in Africa were started in FY09: Niger HR collaborative and the Uganda District Health Management collaborative
Performance Target 4.1b: Support the development of two phase I improvement collaboratives addressing the chronic care of HIV/AIDS patients across the continuum of care, from the level of self care to referral hospital care. At least one of these collaboratives must be in Africa.	▪ In FY08, HCI developed the ART framework which applies the chronic care model to HIV/AIDS care in developing country settings and focuses QI activities to reduce gaps in coverage, retention, and improved clinical outcomes. ▪ Five phase I improvement collaboratives addressing the chronic care of HIV/AIDS patients, applying the project's ART Framework, were launched in FY09: 1) Nicaragua ART collaborative 2) Cote d'Ivoire ART/PMTCT collaborative 3) Uganda HIV coverage collaborative 4) Uganda HIV retention collaborative 5) Uganda HIV clinical outcomes collaborative
Performance Target 4.2: Conduct at least three descriptive and intervention studies.	▪ The documentation of QI in OVC programming in Ethiopia was completed in FY09 and two descriptive case studies prepared describing in detail the results of the piloting of outcome-oriented OVC service standards ▪ A descriptive study of the factors associated with QI team performance in Niger was initiated as part of the larger institutionalization study ▪ A study has been planned for FY10 in Guatemala on the application of QI to community level services in the Community ProCONE demonstration collaborative begun in FY09
Objective 5: Expand experience with the spread collaborative approach in USAID-assisted countries	
Performance Target 5.1: Support the development of 7 phase II spread collaboratives which extend improved practices to an average population of at least 100,000 beneficiaries and achieve levels of improvement of 75% that of the original phase I collaborative within 18 months. Contract activities listed elsewhere in this statement of work which extend improvements on this scale also contribute to fulfilling this target.	▪ By the end of FY09, HCI had developed seven phase II spread collaboratives: 1) Guatemala Basic ProCONE spread collaborative 2) Nicaragua STI/HIV Spread collaborative 3) Nicaragua maternal and newborn complications spread collaborative 4) St. Petersburg, Russia spread collaborative on HIV treatment, care and support 5) St. Petersburg, Russia spread collaborative on TB/HIV integration 6) Orenburg, Russia spread collaborative on HIV treatment, care and support 7) Orenburg, Russia spread collaborative on TB/HIV integration
Performance Target 5.2: Conduct at least 6 studies of the process by which one facility	▪ A concept note to guide research on spread was developed by the R&E team. A methodology for documenting the spread of improvements across teams

team implements improvements developed by another team, including consideration of the role of documentation, direct exchanges between teams, and facilitation by experts.	was developed in FY09 as part of research on spread. ▪ HCI initiated in FY09 a major study on spreading evidenced-based maternal and newborn care practices and continuous quality improvement in Ecuador ▪ Five more studies were planned and will be implemented in FY10: 1) Using learning – spread of innovations across teams in an HIV/AIDS Collaborative in Cote d'Ivoire 2) Expanding the learning for EONC: Use of learning from a demonstration phase in new teams in a spread phase in Guatemala 3) Expanding learning for HIV/AIDS– Using learning from other partners' collaboratives in new collaboratives on HIV/AIDS in Tanzania 4) Using learning – sharing innovations across teams in an MNCH Collaborative- effects of an interactive website in Russia 5) Using learning – sharing innovations across teams in an HIV/AIDS Collaborative in Uganda
Objective 6: Expand the experience base for other specific QI approaches	
Performance Target 6.1: Apply and/or evaluate at least 6 QI tools, methodologies, or approaches in addition to those listed elsewhere in this statement of work.	▪ Eleven applications or evaluations of other QI approaches were completed or underway by the end of FY10: 1) Cote d'Ivoire HIV quality of care assessment 2) Uganda private-for-profit HIV quality of care assessment 3) Development of an HIV quality assessment toolkit 4) Development and field testing of the Framework for improving care and outcomes of patients on ART 5) Updating of the TB computer-based training CD-ROM in Bolivia 6) Development of a TB computer-based training CD-ROM in Indonesia 7) Preparing Ministry of Health management systems for ISO:9001, 2008 quality management certification 8) Evaluation of the impact of job aids on counseling for maternal and newborn care in Benin 9) Evaluation of HIV Training in Uganda – HIV Training 10) Evaluation of HIV Training in Uganda – patient records and monitoring tools 11) Evaluation of HIV trainings in Tanzania – IYCF
Performance Target 6.2: In conjunction with at least two of the QI evaluations listed in this statement of objectives, incorporate a comparative analysis of established supervisory practices on the same topic, in facilities not participating in the QI initiative.	▪ Four possible study topics have been identified for development in FY10: 1) Endline assessment of HR activities in Niger (comparison to control areas); 2) Effectiveness of QI comparison of QI and non QI sites in South Africa; 3) Contribution of QI to effectiveness of Conditional Cash Transfer program's achievement of their objectives in Guatemala; and 4) Comparison of routine support and QI in Cote d'Ivoire
Objective 7: Improve the cost-effectiveness of QI in USAID-assisted countries	
Performance Target 7.1: By the second year of the task order, develop a functioning global knowledge management (KM) system for improvement information.	▪ The project's Health Care Improvement Portal was launched at the end of FY09
Performance Target 7.2: Conduct at least 15 studies and evaluations to (1) support the	▪ Five user surveys have been planned for FY10 for the HCI Portal and maternoinfantil.org web site ▪ Five studies to validate submissions to the HCI KM site from outside the

design of the KM system; (2) evaluate field applications of system content; and (3) validate selected submissions.	project are planned in 2010 ▪ Five studies to document and evaluate field applications of system content are planned in 2010
Performance Target 7.3: Carry out 10 studies related to improving the cost-effectiveness of specific QI approaches or methodologies.	▪ Eight studies have been initiated or planned through the end of FY09: 1) Validity of self-assessments in EOC collaboratives in Ecuador 2) Cost implications of spread strategy for EONC practices and CQI in Ecuador 3) Institutionalization of EONC Better Care Practices and QI in Niger – using local experts to develop an institutionalization change package 4) Validity of collaborative results in Niger- comparison of QI's monitoring, external audit and observation data 5) Sequential validity of self-assessment for ART-PMTCT services in Tanzania 6) Effectiveness of HIV patient monitoring training program in Uganda 7) Validity of self-assessment data in Uganda 8) Sample size determination for time-series charts for QI ▪ HCI created the position of a full-time health economist at headquarters and recruited for the position. Dr. Edward Broughton accepted the position and started work in October 2009. He is now developing new costing studies.
Performance Target 7.4: By the end of the task order, the KM system has been accessed by at least 1000 users, 50 acceptable submissions from outside the task order have been received and posted, and the contractor has responded to 200 requests for information or assistance.	▪ Automated tracking of number of site users and other metrics of how the Health Care Improvement Portal is being used is in place using Google Analytics ▪ In FY10, forms through which users can request assistance and information, either related to QI methods or to the application of QI to specific technical areas, will be added to the HCI Portal; response to such requests will be documented ▪ The maternoinfantil.org site tracks usage and user submissions from inside and outside the contractor team; through the end of FY09, the site had attracted 13,384 unique visits, averaging 73 hits per day, and had posted 241 articles, experiences, and tools, including 10 from outside the task order ▪ The public site of the Russia Web Communicator which will be launched in FY10 will also track access and usage by HCI-affiliated users and other users
Performance Target 7.5: Within three months of the award, the contractor will negotiate with the current incumbent the transfer of all USAID-supported documents, reports, and other products on the web site www.qaproject.org , and arrange for the uninterrupted global availability of its content.	▪ All of the publications and technical content on QI methods from the Quality Assurance Project web site are available on the HCI Portal, both through the HCI Publications page and as highlighted technical resources on improvement tool and improvement topics pages
Objective 8: Provide global technical leadership for QI in USAID-assisted countries	
Performance Target 8.1: The policy and program documents of three international organizations incorporate language explicitly endorsing an organized QI program as an integral component of the	▪ HCI assisted the International AIDS Alliance to add a section on Quality Improvement to its Toolkit for OVC Programs in FY08 ▪ OGAC endorsed the facilitators' guide for quality in OVC programs in FY09 ▪ The HCI Director and COTR collaborated with WHO, the New York State AIDS Institute, CDC, and other cooperating agencies to develop the content on quality improvement of HIV/AIDS care that was included in a manual for

health services which they support.	PEPFAR implementers distributed at the HIV Implementers' meeting in Kampala in June 2008 ▪ In FY09, HCI began a new collaboration with WHO, Harvard University, and the World Alliance for Patient Safety to apply QI methods to the large-scale spread of care checklists
Performance Target 8.2: Contractor staff and their collaborators will produce 10 technical reports and papers related to describing QI interventions and measuring their impact, including 5 papers published in peer-reviewed journals.	▪ By the end of FY, HCI had published three technical reports describing QI interventions and measuring their impact: 1) Expanding TB and TB/HIV Integrated Services in Thai Binh Province, Vietnam (January 2009); 2) Russia site visit report, Collaboratives evaluation (August 2008); 3) Collaboratives evaluation report (June 2008) ▪ Two other technical reports were drafted by the end of FY09 and will be published in FY10: 1) Ethiopia case study (published in October 2009) and 2) Collaboratives evidence report (to be published in December 2009) ▪ HCI has published one peer-reviewed journal articles describing QI interventions and their impact: *Malaria* article published in FY08 that described the impact of a QI intervention (job aids for malaria rapid diagnostic tests) ▪ One manuscript evaluating the impact of a QI intervention was submitted to a peer-reviewed journal (Tanzania infant feeding counseling tools) ▪ Two manuscripts describing aspects of the Framework for Improving the Quality of HIV Care were drafted in FY09 and are now in technical review ▪ A manuscript summarizing the findings of the analysis of collaboratives evidence will be submitted to a peer-reviewed journal in FY10
Performance Target 8.3: The contractor will facilitate at least five articles or broadcasts in mass media which address the nature of QI activities and their results.	▪ In July 2008, the AIDSMAP web site published an article on HCI's QI efforts to introduce HIV testing and counselling into TB clinics in Lesotho ▪ Dr. Refiloe Matji, HCI's Regional Director for Southern Africa, was interviewed in March 2009 on the *News Hour with Jim Lehrer* on the Public Broadcast System in the United States ▪ Articles on improving HIV care in Russia were published in FY09 in two issues of the magazine *AIDS Sex Health* in Russia
Performance Target 8.4: At least once during the period of performance, the contractor will convene an external technical advisory group (TAG), consisting of experts in fields pertinent to the statement of work, with membership approved by the CTO.	▪ The Technical Advisory Group was convened at USAID in May 2009; the panel consisted of six world-class experts in improvement who were approved by the COTR
Performance Target 8.5: 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 two training institutions, such as medical and nursing schools, schools of public health, or ministry of health training institutes.	▪ A mini-course on QI was developed for delivery in October and November 2009 for medical students, through the Afghanistan Public Health Institute; a one-week QI course will be developed with the Institute in 2010 ▪ HCI has developed a distance learning QI course with the Methodological Center for Quality of the Ministry of Health and Social Development in Russia. The course will be made available on the public side of the Web Communicator in FY10. The Center will award a certificate in Health Care Organization to those who successfully complete the course.

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