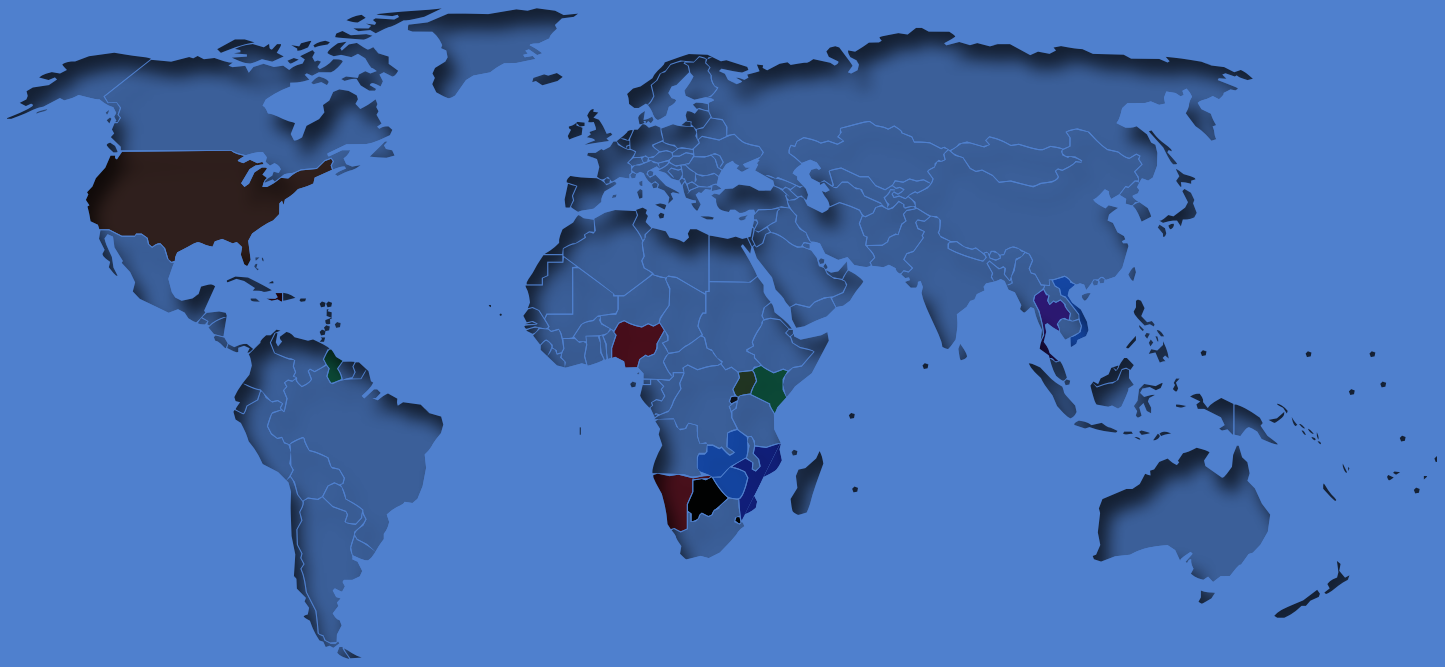
HEALTHQUAL International Update



USA	THAILAND	UGANDA	MOZAMBIQUE	HAITI NIGERIA NAMIBIA	GUYANA KENYA	BOTSWANA SWAZILAND RWANDA	VIETNAM ZAMBIA ZIMBABWE
1995	2003	2005	2006	2007	2008	2009	2012

HEALTHQUAL INTERNATIONAL

A PUBLIC HEALTH APPROACH TO QUALITY MANAGEMENT

ABOUT HEALTHQUAL INTERNATIONAL UPDATE

The HEALTHQUAL model focuses on strengthening and improving health systems with the goal of creating self-sufficient local quality management programs that are sustainable over time. Quality improvement activities involve clinic staff and consumers with support from Ministry of Health leadership. These structural features are designed to be lasting even with staff turnover, organizational leadership changes or political transitions.

HIVQUAL International was launched in Thailand in 2003, quickly expanding globally to PEPFAR focus countries in Africa, the Caribbean and South America. The HIVQUAL model has been successfully adapted by ministries of health and implemented by country teams throughout these regions. In 2010, HIVQUAL International transitioned to HEALTHQUAL, a programmatic development reflecting our expanded focus on a public health approach to quality management, including and extending beyond HIV care, to encompass other chronic and infectious diseases. The methodology between HIVQUAL and HEALTHQUAL is identical, with HEALTHQUAL characterized by a broader focus on population health to strengthen overall quality of care across national health systems.

The following is a chronological compilation of the HEALTHQUAL International Update, detailing both broad programmatic progress and the evolution of quality improvement work undertaken in HEALTHQUAL implementing countries.

HEALTHQUAL is supported through the US Department of Health and Human Services, Health Resources and Services Administration as the International Quality Center for PEPFAR.

For more information on HEALTHQUAL or the HEALTHQUAL International Update, please contact Joshua Bardfield at jeb16@health.state.ny.us.

The HIVQUAL International Update

HIVQUAL International offers a simple, systematic strategy for building capacity to improve quality of HIV care. Using a performance measurement strategy based on a sampling methodology, HIVQUAL facilitates the process of data collection and reporting to improve quality.

May 2008 *Volume I, Issue 1*

COUNTRY PROFILE: HIVQUAL-Uganda pushes ahead at full speed

Second data report complete; new collaboration with UNICEF and scale-up

HIVQUAL-Uganda continues to stride forward with the completion of a second round of performance measurement, expansion to additional sites and a new partnership with UNICEF to bring quality improvement to pediatric care. Performance at the national level has improved across nearly all indicators, showing the importance of quality improvement strategies.

This collaboration between Uganda's Ministry of Health, CDC Uganda, HIVQUAL International, and now UNICEF began in mid 2005 to address the rapid scale up of antiretrovirals. Seven indicators of HIV care were developed and in 2006 baseline data collection for 20 pilot sites, spread across 4 regions, were completed. During regional Quality Improvement trainings, each pilot site worked as a team to choose a focus area for improvement based on their own data. Back at their sites, each team expanded its members, refined their improvements and implemented their interventions. A multitude of such interventions were put into action, including patient outreach to promote CD4 testing, and clinic staff participation in MOH-sponsored prevention education and counseling courses. System improvements to promote better linkages between TB and HIV programs were also addressed by several programs.

The second data collection was completed December 2007, and a report was issued in February 2008. Improvement has been demonstrated across most indicators at most of the pilot sites. Across all sites, CD4 testing and continuity of care improved by approximately 10%, while adherence assessment and TB assessment and screening increased up to 15-20%. Prevention education increased nearly 30%.

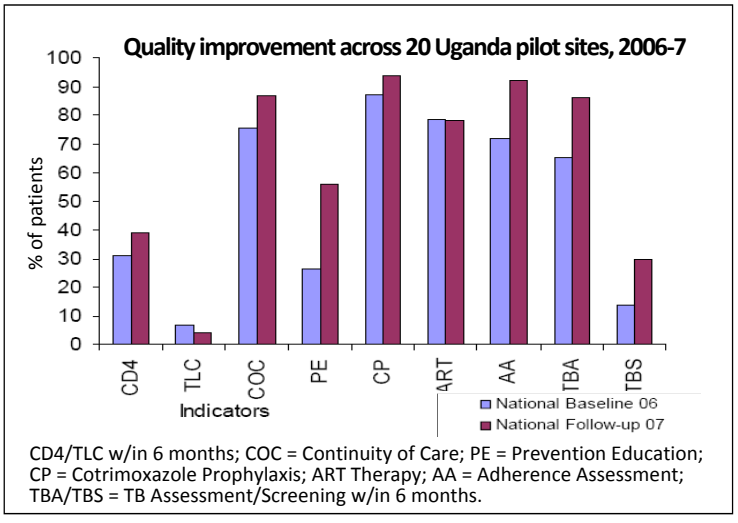
HIVQUAL-U is led by its core in-country team, based in the Ministry of Health. This dedicated team consists of Dr Godfrey Kayita (Program Officer) and Julius Ssendiwala (Data Manager). Vital assistance is also provided by the support staff within the MOH AIDS Control Programme. The group is also joined by Prosper Behumbiize, who is an informatics analyst based with CDC-Uganda. Supported by Ministry of Health senior leadership, this dynamic and skillful team has worked to build a sustainable long term approach to quality improvement in Uganda. For more background on Dr Kayita, see his profile in this month's "Faces of HIVQUAL" feature.

continued on page 3

QI PROJECT: Improving access to care for children

After data collection in January 2008, it was found that only six children were in care at Aduku Health Centre IV in Uganda. The clinic then began an energetic campaign to enroll more children. For example, a children's day was created for every Thursday, during which the clinic would provide comprehensive pediatric care including immunizations, counseling and testing, maternal support services and games for the children. Just a few months later, the clinic now has 48 children in care.

The Uganda in-country team: (from left) Godfrey Kayita MD, Julius Ssendiwala, and Prosper Behumbiize.



CD4/TLC w/in 6 months; COC = Continuity of Care; PE = Prevention Education; CP = Cotrimoxazole Prophylaxis; ART Therapy; AA = Adherence Assessment; TBA/TBS = TB Assessment/Screening w/in 6 months.

Rwanda, Nigeria and Thailand delegations visit NY for Study Tours

2008 may have only just begun, but the AIDS Institute has already had the pleasure of hosting three country delegations this year for Study Tours in New York City. February 2008 saw the arrival of delegations from Rwanda and Nigeria, while March brought a group of visitors from Thailand.

New York City Study Tours are an important mechanism for key in-country personnel to observe how quality improvement is implemented in a variety of health care settings in New York. Through site visits, meetings and presentations, visitors gain an increased body of hands-on knowledge, understanding and skills to address and implement quality improvement. Study Tours usually last approximately one week and include MOH and CDC staff and other government and NGO personnel. Delegations have the opportunity to learn from AIDS Institute and facility staff about HIVQUAL, its implementation at both the facility and national level, and gain an increased familiarity with important key components of the program such as coaching and data management.

The tours also represent a government-to-government exchange on how to manage quality improvement. In February 2008, the visits by Rwandan and Nigerian delegations coincided, allowing for additional peer learning between the two groups.

During the Study Tour, the delegations visited a wide variety of sites ranging from large hospitals such as Montefiore Medical Center and Harlem Hospital Center to smaller facilities like the Joseph P. Addabbo Center which provides care to underserved and immigrant communities in Queens, NY.

At the Montefiore Medical Group's CICERO outpatient HIV program, the delegations learned in detail how a quality management program can be developed, managed and maintained across a multi-site system of clinics. At the Veterans Administration hospital, the delegations had the opportunity to view a comprehensive electronic medical record system that allows for comprehensive care management and practitioner decision support.

In addition to site visits, study tour delegations often participate in relevant meetings at the AIDS Institute held during their stay. These meetings often provide insights into a variety of strategies for quality improvement, and allow visitors to improve their understanding of how quality improvement can be implemented at local, regional and national levels.

The tour also provides an opportunity for the U.S.-based team to learn from our global partners. This year, the Rwandan and Nigerian delegations had the opportunity to present to the New York City Quality Management Program. One presentation highlighted the Rwandan pay for performance program, which involves quarterly scoring of facilities that are then tied to payment. The program has demonstrated that pay for performance can promote significant increases in quality in a short period of time through increases in health worker salaries and motivation. The presentations from both delegations were excellent opportunities for mutual learning between the Steering Committee and the visiting delegations.

During their March visit, the Thai delegation gave an informative presentation to the New York State Quality of Care Advisory Committee, discussing HIV/AIDS in Thailand and their extensive QI work there. The group was also able to participate in the New York State Consumer Advisory Meeting; providing the delegation with an opportunity to see the New York example of consumer feedback in HIV care.

Members of the Nigerian Study Tour delegation pose with NYC staff at the AIDS Institute.

Members of the Thai Study Tour delegation viewing the Electronic Medical Records system at the Veteran's Administration Hospital in Manhattan.

QI TIP OF THE MONTH:

When forming a quality improvement team to solve a problem, be sure to include people who actually do the work. Front-line staff often know the most about why there is a problem, and also have great ideas about how to fix it.

— Charley Borden, MBA
NYSDOH AIDS Institute

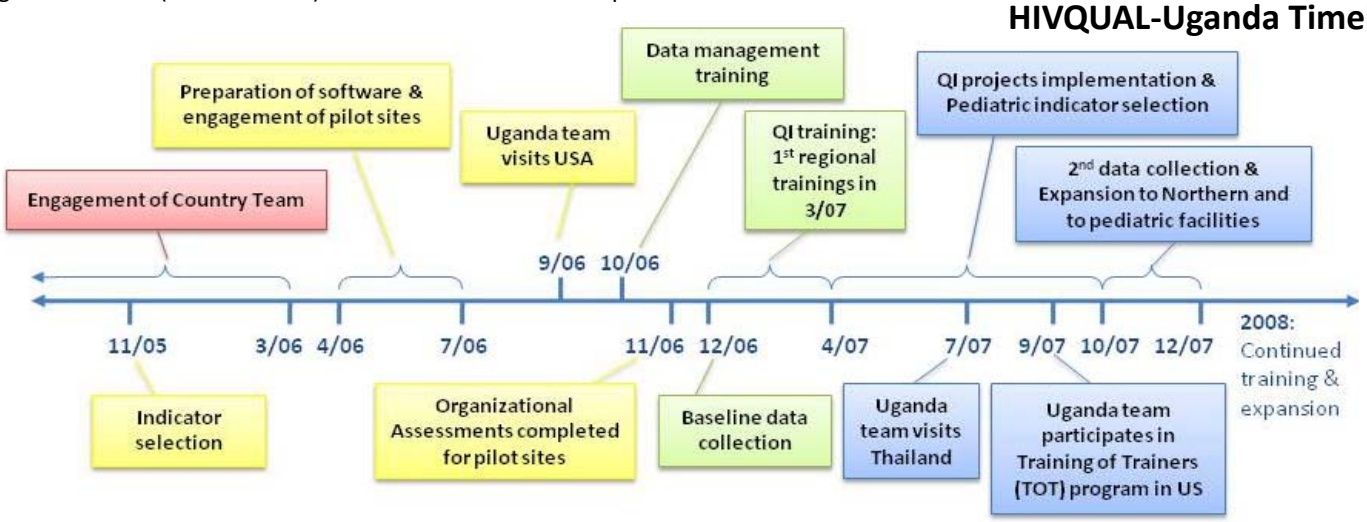
continued from page 1

Uganda country profile

The ambitious in-country team is also currently working hard at spreading HIVQUAL to an additional 80 sites throughout the country, including regions in the North. 20 of these new sites are pediatric care facilities; in collaboration with UNICEF, HIVQUAL-U is spreading HIVQUAL beyond adult care to the care of HIV+ children. In July 2007, a two day meeting was held of key stakeholders and leading pediatricians to develop a set of pediatric indicators. Dr Bruce Agins (Medical Director, AIDS Institute) and Dr. Rangsima Lolekha (CDC-Thailand) were in attendance to help lead the process. The end result was a list of 11 indicators ranging from ARV therapy to malaria prevention. Planning is also ongoing to use the HIVQUAL-U model to improve the quality of care for all children, not just those infected with HIV. To date, the first round of data collection has been completed for pediatric indicators and quality improvement activities are underway. For an example of a pediatric QI project, see the special feature box on page 1.

As the second country to implement HIVQUAL International (the first to do so under PEPFAR), we hope HIVQUAL-U's experiences and lessons can inform the efforts of other current and future country projects.

HIVQUAL-Uganda Timeline



FACES OF HIVQUAL

Gram Mutandi, MD [Namibia]

Dr Mutandi is the Namibia National HIVQUAL Project Coordinator. He is based at the Ministry of Health and the CDC GAP Office in Namibia.

Dr Mutandi received his medical degree from the University of Zimbabwe, his postgraduate diploma in HIV Management in South Africa, and is currently studying part-time for an MPH.

"In Namibia, the greatest need for quality improvement is in record keeping for routine HIV care, TB screening, laboratory monitoring of HIV and prevention education."

- Dr. Mutandi

Kayita Godfrey Lumbuye, MD, MPH [Uganda]

Dr Kayita is the program officer heading the HIVQUAL-U team. He has spearheaded the implementation and expansion of quality improvement activities in the country to date.

Before joining the Ministry of Health-Uganda in 2006, he worked as the Medical Superintendent of Masindi district Hospital and the In-charge of Buruli Health Sub district located in mid northern part of Uganda.

"More than 100,000 people with HIV/AIDS in Uganda are accessing ART services in over 303 facilities. It is critical to establish a system to assess and improve the quality of clinical care that these patients are receiving from these facilities. This will ensure the adequate use of resources and avoid harm, including the emergence of resistant strains of HIV."

- Dr. Kayita

COUNTRY UPDATES:

Haiti:
Engagement of pilot sites is ongoing, with baseline data collection expected for July 2008.

Mozambique:
Baseline data collection was completed in January 2008, and some QI projects have begun at certain sites.

Namibia:
Baseline data collection at 16 pilot sites was completed in March 2008. QI project implementation is expected to begin this month.

Nigeria:
Baseline data collection at 20 pilot sites is expected to be completed soon, with data already received from 10 sites.

Thailand:
Fully operational since 2004, HIVQUAL –T is now fully integrated into the national healthcare system and is linked to hospital accreditation. HIVQUAL-T is managed by the Ministry of Public Health and the National Health Security Office, with support from the Thailand-US CDC Collaboration (TUC).

Uganda:
See this month's Country Profile for an extensive update.

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Nicasky Celestin
Roland Charles
Kathleen Clanon
Nirva Duval
Marie Michelle Laurole
Daniel Lauture

HIVQUAL-Mozambique
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Florindo Mudender
Mauro Sanchez
Klaus Sturbeck
Pascoa Zualo Wate

HIVQUAL-Namibia
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Claire Dillavou
Ndapewa Hamunime
Jan King
Ellen Mooney
Gram Mutandi
Mark Netherda

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Phoebe Arde-Acquah
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Sqn Ldr. Emeka Ifebi
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Muhammad Mukhtar
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Darrell Singer
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HIVQUAL International is supported through the U.S. Department of Health and Human Services, Health Resources and Services Administration as the International Quality Center for PEPFAR and through funding from UNICEF.

For more information on the *HIVQUAL International Update*, please contact Marion Billings at mab24@health.state.ny.us.

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July 2008 *Volume I, Issue 2*

COUNTRY PROFILE: HIVQUAL-Mozambique continues with QI efforts

With first data collection complete, team moves forward with QI implementation

As the second country to implement HIVQUAL under PEPFAR, HIVQUAL-Mozambique has made exceptional progress since engagement began in October 2006. The first round of data collection was completed in early 2008, and the active country team is currently preparing for follow-up data collection later this year.

The first data collection, which started just one year after engagement meetings began, showed, unsurprisingly, variability across the indicators and sites. The data highlighted several indicators as targets for quality improvement projects. 36 pilot sites were selected by the Ministry of Health for the first round of performance measurement. HIVQUAL-Mozambique has been characterized by a strong central commitment from the Ministry of Health which reflects their policy to prioritize the quality of services. The MOH leads the program, with support from the CDC-GAP office and other national-level agencies.

The project has also been especially distinguished by the growth of national level involvement and support since engagement in 2006. HIVQUAL-Mozambique is now fully integrated into the Ministry's HIV/AIDS activities. Decisions regarding indicators, site selection and expansion plans are conducted at the Ministry level via existing working groups and committees. All treatment partners supported by PEPFAR, including JHPEIGO, actively participate in indicator review with national program leaders.

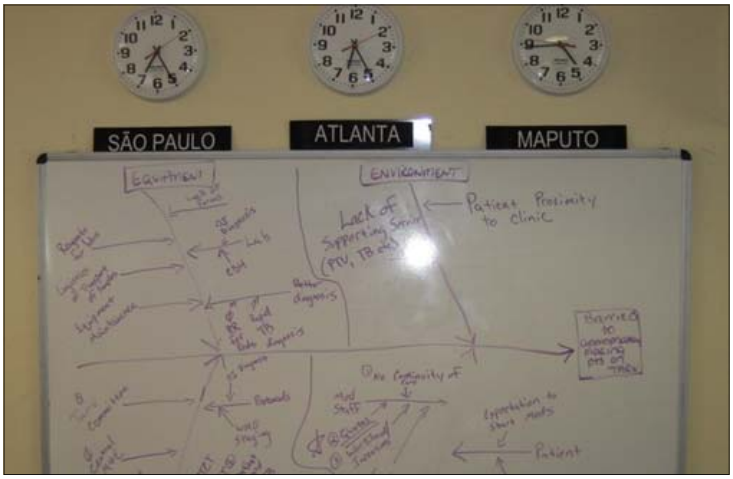
Performance Measurement:

For the data collection, two separate samples were used to reflect differing national guidelines for HIV positive patients on ART and those not prescribed ART. Each sample included more than 3,000 patients, with sample sizes at facilities ranging from 32 to 189 for ARV patients and 47 to 212 for non-ARV patients. With this baseline, next year the two groups will be combined into one sample and then disaggregated for reports.

At the national level, strong performance was observed in continuity of care and CD4 monitoring for all patients. Among those on ART, strong rates of adherence assessment were observed, and a high proportion of patients meeting the eligibility requirements for ART are receiving it. Areas targeted for improvement were cotrimoxazole prophylaxis, TB screening, and at some sites, prevention education. Improving coordination between HIV and TB care was also specifically highlighted as an area for improvement as a result of the baseline performance measurement data. While rates were fairly high for adherence assessment, this area was also targeted for improvement as there was some confusion amongst facilities as to how this should be defined for the purposes of performance measurement.

Quality Improvement:

In February 2008, quality improvement trainings were conducted in Maputo and Beira. Present at the trainings were the HIV, TB and malaria provincial coordinators for three key regions (Manica, Gaza and Maputo). The newly analyzed baseline data were presented to participants to initiate planning for focused quality improvement projects



A fishbone diagram developed to examine barriers to ARV treatment during a quality improvement training at the CDC-Mozambique office.

Dr Mussa Calu (second from left), the HIVQUAL-Mozambique team leader, with clinic staff during a site visit in Ile.

What's new with HIVQUAL-T?

Thailand holds world's first national HIVQUAL conference

HIVQUAL-T began in Thailand in 2003 and was the first country outside of the US to use the HIVQUAL framework for improving the quality of HIV care. Since its pilot implementation in 12 sites at that time, HIVQUAL-T is currently expanding to 914 sites throughout the country, and is now integrated into the Thai healthcare system.

In November 2007, the first National HIVQUAL-T Conference was held with over 400 participants, with participants from the National Health Security Office, the Office of Disease Prevention and Control and the Provincial Health Offices. In addition, 147 hospitals were represented at the meeting. This national-level HIVQUAL conference was the first of its kind anywhere in the world. Participants improved their knowledge on quality improvement in HIV care, and were also able to share their experiences through peer learning.

Throughout 2007-2008, the HIVQUAL-T framework has continued to spread throughout Thailand with several trainings at the national and regional levels. A Training-of-Trainers (TOT) session was held in early 2007 with 257 participants from throughout the country. The TOT covered a number of topics including the background and principles of HIVQUAL-T, the importance of quality improvement, and training in the HIVQUAL-T software

Finally, in late 2007, additional HIVQUAL-T expansion workshops were held for hospital providers. More than 1,000 providers were trained from over 600 different hospitals throughout the country. As of June 2008, 482 of these hospitals have completed a round of performance measurement.

Also of note is HIVQUAL-T's ambitious expansion to pediatric care, with 28 hospitals participating as of 2008. In addition, HIVQUAL-T has launched a new website, www.cqihiv.com, which is available in Thai and English.

Participants at the 2007 Annual National Meeting for Quality Improvement in HIV/AIDS Treatment and Care.

HIVQUAL-MOZAMBIQUE QI PROJECT:

Integrating TB testing and treatment into HIV care

In the Zambèzia Province of Mozambique, three health centers (Centro de Saùde do Alto Molocué, Centro de Saùde do ILE and Centro de Saùde de Namacurra) participated in the first round of HIVQUAL data collection in late 2007. These sites are supported by Friends in Global Health (FGH), an affiliate of Vanderbilt University. After analysis of the data and production of the first round report, the district clinical representatives from each of the three participating sites led discussions of the results at weekly ART committee meetings held at the district hospitals. Because these committees were responsible for maintaining and improving ART services, it was decided that they would serve as the QI committees for the district.

After review of the performance data, the district representatives, in collaboration with FGH, decided to focus on the integration of HIV and TB services – an important priority for the Ministry of Health. In particular, the project would put an emphasis on increasing TB screening in all HIV positive patients. In Zambèzia province, average TB screening rates were approximately 33% in 2007. TB is a major public health problem in Mozambique, with an estimated 90,000 new cases in 2004. In 2006, it was estimated that 30% of all TB patients were co-infected with HIV.

QI planning teams were formed, which included clinic staff. The teams determined that the first step in the QI project was to implement the use of a previously developed symptom checklist for TB screening that is added to the patient's chart. The checklist was used by nurses, medical technicians and doctors during clinical visits at the health centers. It was hoped that this would then lead to increased TB testing and treatment initiation for HIV positive patients. The project was met with great success and positive reception by clinicians; it is now being implemented in three additional sites supported by FGH (that had not previously participated in HIVQUAL) and the Ministry of Health has incorporated the use of the checklist as part of its TB protocol.

The current provincial director for HIV services in Zambèzia, who was formerly the chief medical officer in one of the districts where HIVQUAL was initially implemented, has expressed interest in implementing HIVQUAL throughout all six districts of in the province.

This QI project is notable for several reasons. By selecting an important local and national public health issue such as TB screening, the project paralleled national priorities. At the district-level, the project successfully engaged the district health officer, moving forward discussions and commitment to quality improvement. Thanks to this engagement, the improvements have spread through the provincial health unites as planned.

Overall, the success of the QI project, and FGH's initiative has catalyzed an expanded interest and commitment at the national level to HIVQUAL and quality improvement.

continued from page 1

HIVQUAL-Mozambique

[for an example of a quality improvement project that was developed after the first HIVQUAL data report, please see the feature box on page 2]. These interactions allowed for extensive discussion regarding the possibility for further trainings and additional technical support to be provided to sites and Ministry of Health personnel at the regional level.

Last month, Dr Pascoa Zualo Wate from the Ministry of Health had the opportunity to present at the PEPFAR Implementers Meeting in Kampala, Uganda. Her presentation gave an overview of the HIVQUAL framework and an up-to-date summary on the activities and accomplishments of HIVQUAL-Mozambique. This presentation sparked much interest from the audience as a model of national quality improvement for HIV services. Dr Pascoa will also have a poster at the upcoming International AIDS Conference next month in Mexico City.

For the coming months, plans are underway to apply HIVQUAL-Mozambique to PMTCT services. Other key issues include ensuring that pregnant women who are eligible for ART receive treatment, and improving linkages to both postpartum care and recommended infant care. Discussions are underway to include VCT services as well.

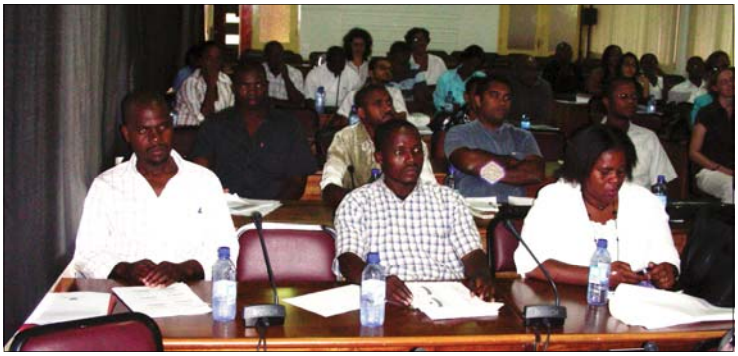
Future plans are also under discussion for the further development of a national quality management program, and an expansion of quality improvement staff at the Ministry of Health. Increased collaboration with partner organizations is also underway.

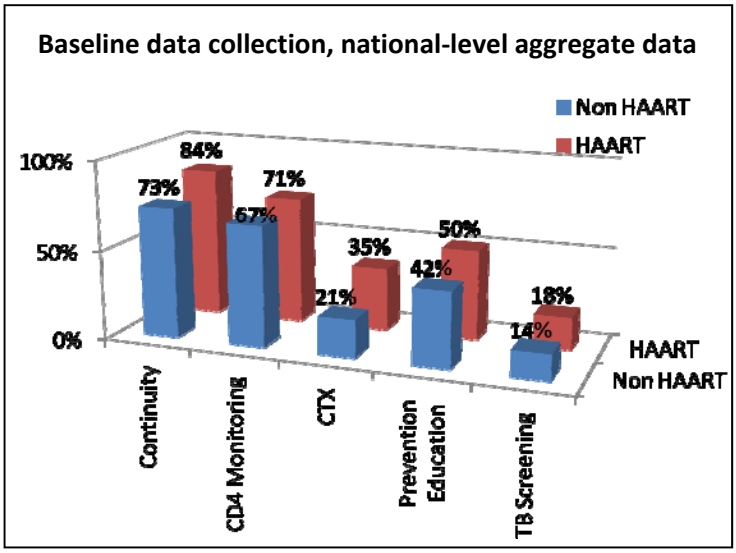
In May 2008, a meeting convened by Dr Pascoa with other senior Ministry of Health staff and representatives from USG-supported partner agencies. At this meeting, indicators were reviewed and slightly modified for the second round of data collection will begin in August.

The HIVQUAL-Mozambique team is led by Dr Mussa Calu. Dr. Calu received his medical degree from Maputo University, and has a postgraduate degree in physical medicine and rehabilitation from the University of Trieste in Italy. He was previously a member of the USAID HIV/AIDS team. Dr Calu is currently a member of the MOH Natioanl Quality Committee, as well as the PEPFAR Treatmetn Working Group. At CDC-Mozambique, HIVQUAL has been supported by Dr Klaus Sturbeck, Senior ART site development specialist for the Global AIDS Program, and Dr Mauro Sanchez, Associate Director for Science at the Global AIDS Program. Drs Dr Pascoa Zualo Wate represents the Ministry of Health. In early 2008, a data manager was hired for the project; Mr. Antonio Langa joined the HIVQUAL-Mozambique team. In Maputo, the HIVQUAL team is located at JHPIEGO, which has provided administrative support for the project.

HIVQUAL-Mozambique Revised Indicators

Continuity of care	Proportion of HIV+ patients who have met the MOH guidelines for clinical visits.
CD4 monitoring	Proportion of HIV+ patients who have met the MOH guidelines for CD4 tests.
ARV therapy	Proportion of HIV patients receiving ART who met the MOH clinical and immunologic eligibility criteria.
Adherence assessment	Proportion of HIV patients on ART who have had at least one adherence assessment during the review period OR Proportion of pharmacy pickups with an adherence assessment.
CTX prophylaxis	Proportion of HIV+ patients receiving CTX during the last 6 months.
TB screening	Proportion of HIV+ patients who have been screened for TB during the 12 month review period.
Prevention education	Proportion of HIV+ patients who have had HIV prevention education in the last 6 months.
PEP	Proportion of healthcare workers exposed who received treatment in accordance with national PEP guidelines.





Clockwise, from top left: A list of the revised HIVQUAL-Mozambique indicators; Dr Mussa Calu (center) with staff at a Ministry of Heatlh clinic, assisting with data collection; National-level data from the baseline data collection, showing two separate samples (ARV patients and non-ARV patients); A quality improvement training at the Ministry of Health.

HIVQUAL INTERNATIONAL NEWS BRIEFS: WHAT'S GOING ON NOW?

Plans underway for Namibia's second data collection
HIVQUAL-Namibia is about to begin its second round of data collection later this year. The baseline data collection was completed in March, and QI project implementations have been ongoing. See the next issue of the HIVQUAL International Update for a full country profile.

HEALTHQUAL Guyana moves forward for pediatric care
HEALTHQUAL is a new partnership between HIVQUAL International, UNICEF, PEPFAR and the Guyana Ministry of Health. HEALTHQUAL will use the HIVQUAL framework for quality improvement in well-child care, HIV care and will pilot inpatient indicators focusing on tuberculosis. Indicators have been developed, and in June 2008 meetings were held with key MOH staff along with an initial training session for site representatives.

First International Training-of-Trainers held in Uganda
Adapted from the successful Training-of-Trainers (TOT) curriculum developed by the National Quality Center, HIVQUAL International hosted its first International TOT in close collaboration with Mildmay. The 3-day training was held July 8th-10th in Entebbe, Uganda. More than 60 experienced trainers participated. Participants will now use their new skills to conduct two quality improvement trainings each over the next three months, resulting in more than 120 new QI trainings. In the following week, an interactive workshop was held with agency leaders to provide QI skills and begin the spread of HIVQUAL through additional agency-supported facilities.

Rwanda invites HIVQUAL-International for QI assessment
Rwanda has significantly scaled up HIV treatment services in recent years, with more than 50,000 patients treated with ART. Given the success in scale-up of clinical services the quality of the clinical package has become a priority to the nation and implementing partners alike. TRAC+ and the Ministry of Health are engaging in a major effort to improve the quality of general health services by addressing communicable and infectious diseases in the pilot project. TRAC+ and CDC-Rwanda invited HIVQUAL International in December 2007 for an initial assessment to recommend how the HIVQUAL framework can benefit the overall health system, including HIV/AIDS care and services.

HIVQUAL-Nigeria continues with upcoming second data collection
Baseline data collection was completed earlier this year, and in May a meeting was held to disseminate the results to the pilot sites and implementing partners. The pilot sites have received QI training and are currently implementing QI projects. The second round of data collection is scheduled for August 2008. A full country profile will be included in the fourth issue of the HIVQUAL International Update.

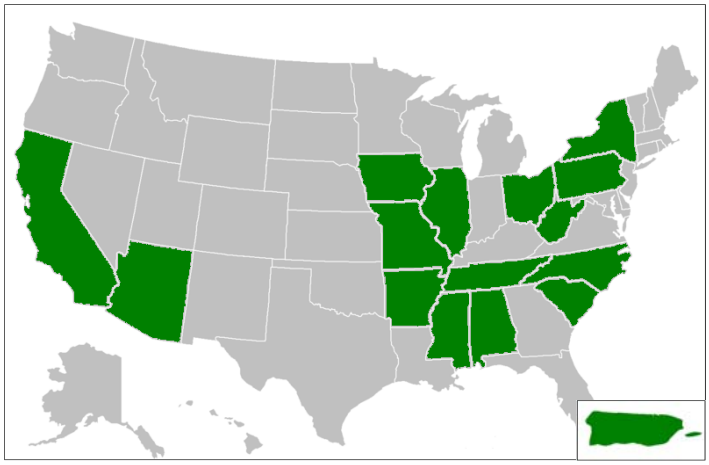
HIVQUAL-Haiti moves forward with implementation
The HIVQUAL-Haiti core team reports that 15 of the 19 pilot sites have instituted quality committees, and some of the sites have started plans for quality improvement projects. Reports for the initial round of data collection are underway and it is expected that the process will be completed later this year. In addition, preliminary discussion are underway for a New York City study tour. A full country profile will be included in the fifth issue of the HIVQUAL International Update.

Update from HIVQUAL National: *Learn more about HIVQUAL…*

The National HIVQUAL Project, which began in the United States in 1995, now has 27 regional quality improvement groups and learning networks spread throughout US and Puerto Rico.

Regional groups and learning networks are excellent opportunities for local and regional collaboration and sharing of best practices, as well as ongoing peer learning, coaching and training. Regional groups are facilitated by HIVQUAL consultants and cover areas of varying size from single metropolitan areas to several states. Learning networks are facilitated by quality experts and bring together practitioners from throughout New York State to discuss a variety of topics related to HIV care .

In addition to providing an important venue for peer learning, the groups and networks can also provide a way for patients to become involved in quality. Group sessions can also serve as a quality improvement orientation for new staff at participating sites. Most importantly, they can help encourage and guide the development and implementation of QI projects at participating sites.



National HIVQUAL Regional Group/New York State Quality of Care Learning Network Penetration
States included in one or more regional group or learning network

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September 2008 ***Volume I, Issue 3***

COUNTRY PROFILE: HIVQUAL-Namibia plans for 2nd data collection

Close MoHSS collaboration, regional approach to trainings and technical support

Namibia has a large land mass of more than 800,000 square kilometers, much of which is desert. With a population of just 1.8 million people, it is one of the most sparsely populated countries in the world. However despite its thinly distributed population, Namibia has an estimated HIV prevalence of 19% among pregnant women and 15.3% among all adults. With an estimated 196,000 PLWHAs scattered across a large geographical area, Namibia faces many challenges in delivering and monitoring care.

Given these challenges and their prior experience with other country-wide initiatives, the HIVQUAL-Namibia team recognized early on that a regional approach was needed to support quality activities in a sustainable way. During the engagement process, starting in 2006, this model was the basis for site selection, data collection, QI training and coaching and mentoring.

The first round of data collection was preceded by 3 intensive 2-day regional trainings with at least 3 representatives from each of the 16 pilot sites. These trainings were opened by Ms. Ella Shihepo, Director of Special Programs at the Ministry of Health. Also facilitating were Dr. Ndapewa Hamunime of the Ministry of Health and Social Services, Dr. Gram Mutandi from CDC and Dr. Jan King, HIVQUAL International. In addition to gaining an understanding of the indicators and data collection processes, the teams were able to start the quality improvement process through teamwork, brainstorming and development of improvement strategies for specific issues of concern in their facilities. These trainings also marked the beginning of peer learning, sharing of successes, frustrations, and strategies toward improvement. The trainings were held in Windhoek (the capital), Swakopmund (Western coast), and Oshakati, which is in the North on the Angolan border that was recently ravaged by severe flooding.

As with all improvement activities, success begins with leadership. HIVQUAL-Namibia has been led by Dr Ndapewa Hamunime. Dr. Hamunime is the Senior Medical Officer In-Charge of Case Management, the MoHSS unit which oversees HIV/AIDS treatment, care and prevention. She has included regional staff in trainings to increase skills at the Ministry level as well as train individuals to provide coaching and mentoring at the facility level.

After the baseline data collection and analysis were completed, national, regional and district level benchmarking and comparative reports were developed and will be used to drive improvements and inform national priorities. Two quality improvement training workshops were held in April, 2008 to present the data to the pilot sites and to prepare them for the implementation of quality improvement projects. Sites were guided through the process of examining the data, choosing targeted projects,

Dr Ndapewa Hamunime conducts a HIVQUAL training session.

and performing a root cause analysis to begin development of intervention plans. In June, the data was also presented to the MoHSS Technical Advisory Committee, chaired by Dr. Ishmael Katjitae.

In October, the second round of data collection is scheduled to begin at the 16 pilot sites. In preparation for this round of data collection, customized HIVQUAL-Namibia software has been developed to streamline data entry, analysis and reporting. Trainings for facility staff on data collection procedures and use of the new software are planned for the coming months. A software user guide is also in development.

Namibia has also adopted several unique indicators, in addition to the traditional HIV management indicators (such as CD4 monitoring, ARV Therapy and PCP Prophylaxis). To highlight important issues affecting quality of care, the HIVQUAL-Namibia team included **food security** and **alcohol screening** to their set of indicators. An inadequate supply of food in certain areas of Namibia hampers achievements in clinical outcomes for people living with HIV. Encouragement is needed to improve screening and increase referrals to NGOs offering nutritional and food security services. Alcohol use also negatively affects disease progression, limits deliverable clinical outcomes and adherence to ARVs, enhancing transmission among patients living with HIV. Both indicators were felt to be vital steps leading to the generation of data that will foster partnerships between clinical teams and community-based organizations providing services to HIV-infected individuals. Performance rates for these indicators during the pilot data collection were low at some sites, as expected, indicating the importance of highlighting these issues and targeting them with improvement activities. Concerns about these additional indicators

continued on page 3

HIVQUAL-NAMIBIA: QI PROJECT

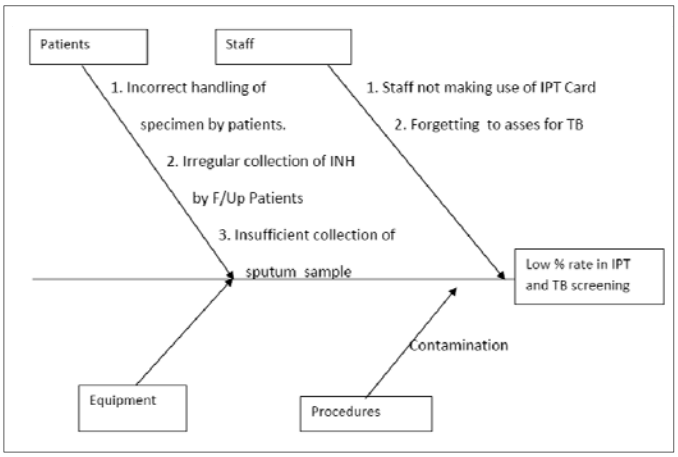
TB screening and prevention

After the first data collection and analysis were completed in early 2008, Rehoboth Hospital recognized an opportunity to improve TB screening and Isoniazid Preventive Therapy (IPT) rates. A meeting was held with the entire HAART and PMTCT teams, during which causes for the low performance rates were discussed. The main problem identified was the lack of documentation for screening and prevention services actually provided.

A fishbone diagram was completed by the group (see right) to identify other possible causes for low rates of IPT and TB screening. Four main areas for intervention were identified. To improve documentation, IPT charts are being made available. Staff were encouraged to use the new forms. TB screening rates were to be improved via team discussions and training, followed by encouraging proper documentation of screening activities in patient files. Sputum collection and handling procedures are being improved by reminding staff of the proper protocol, and educating patients on how to collect proper samples. Finally, patients have been targeted for education about IPT, to help improve adherence and understanding of the importance of the prophylaxis regimen.

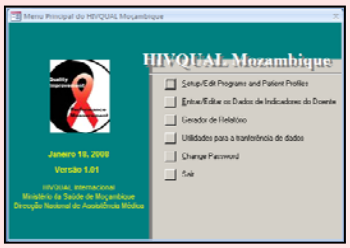
With agreement from the facility staff, the interventions are ongoing. Already, TB screening appears to have improved at the hospital, as shown by an informal examination of patient records. The staff reports that they are more conscious of the need to screen patients for TB and to document their findings in the patient's chart. It is hoped that significant improvements will be seen with the HIVQUAL-Namibia follow-up data collection later this year. ◆

The Rehoboth Hospital ART Team. Front (L to R): Lewellyn Mouton, Juliana Gawanas, Renata MMouton, Erna Steenkamp, Susan Tashiya. Back (L to R): Dr Manyere, S. Hangero, Dr. Judmann.



The fishbone diagram completed by the Rehoboth team, outlining the multi-factorial causes of low TB screening and IPT rates.

FACES OF HIVQUAL: Hugh Dai, MD — *HIVQUAL Programmer*



Since 2000, Hugh Dai, MD, has been a consultant with HIVQUAL, and the chief programmer for the HIVQUAL software. With his unique experience in medicine, information technology, and clinical research, Dr. Dai has brought essential expertise to HIVQUAL in database design, management and statistical analysis.

Dr. Dai completed his medical degree at Beijing Medical University. After working as a clinical analyst for a pharmaceutical company, Dr. Dai worked as a Post-Doctoral Fellow at McMaster University. Currently Dr. Dai is the Director of Data Management at the Mount Sinai Medical Center in New York City. While at Mt Sinai, Dr Dai has created an automatic clinical alert system for adverse drug events by combining clinical knowledge with a data warehouse system, linking together laboratory, pharmacy and other clinical information to reduce the number of adverse events within the hospital system.

In addition to programming the HIVQUAL software for use in New York State and throughout the United States, Dr. Dai has also developed the software for use in Nigeria and Mozambique. He is currently working on an adaptation for HIVQULAL-Namibia and HEALTHQUAL-Guyana. ◆

continued from page 1

HIVQUAL-Namibia Profile

were discussed openly during trainings, including conducting assessments of food security in areas where nutritional resources are often lacking. Another common concern was the burden of documentation for screenings and referrals.

Improvement projects began after the first round of data collection, with clinic teams implementing a wide variety of projects. Several teams focused on improving TB screening rates and raising the number of eligible patients receiving Isoniazid Preventive Therapy (IPT) for TB prevention. In many cases, improvements were implemented through a systems-oriented approach of improving documentation and record keeping through the introduction of new clinic forms and ART cards with specific fields for TB screening and prevention. These new systems not only improve documentation, but will also provide reminders to providers to regularly screen patients and provide preventive treatment when necessary. For example, one team developed a special TB screening checklist form to be attached to each patient file so that all patients can be properly assessed. Another team found that the major barrier was dispensing IPT at separate TB clinics, leading to considerable loss to follow-up. To improve patient adherence and follow-up, the team is now providing IPT *within* the ARV clinic, in conjunction with improved patient education. For an extensive description of one of these QI Projects, see the box on page 2.

Many clinic teams also targeted other indicators such as CD4 monitoring, prevention education, adherence assessment, PCP prophylaxis, alcohol screening and food security. Improvements were implemented using similar approaches of improved information systems to encourage improvements in care. At Onandjokwe Hospital, the team worked to encourage regular CD4 monitoring through weekly meetings with multidisciplinary staff, stressing the importance of requesting regular CD4 counts and documenting results in patient files. At each meeting 10-15 patient files are examined by the group to monitor whether improvements were being made.

Like at Onandjokwe Hospital, improvement projects at other clinics are usually initiated through group discussions with facility staff of all disciplines. This promotes a collaborative approach to the QI activities and creates maximum staff buy-in and commitment to improvements in care. Improvements are expected across many indicators in the next round of data collection. In many cases, chart reviews have already shown improvements.

Once the second round of data collection is completed in October, follow-up meetings are planned in each of the 3 regions for November and December. These meetings will primarily focus on improvement activities conducted at the site level. Facilities will present their quality projects, improvement strategies, successes, and challenges. Training in additional improvement tools and techniques will be included to continue facility level capacity building. In the meantime, the central HIVQUAL team has continued to provide support to sites where necessary, and is implementing a follow-up system via telephone to monitor the progress of improvement projects.

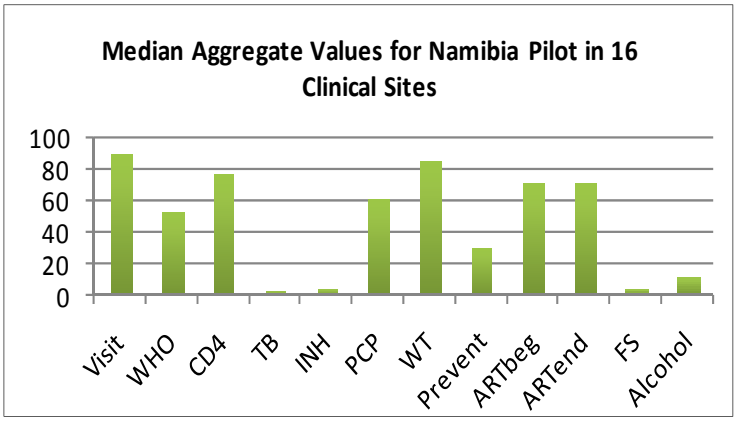
HIVQUAL-Namibia is managed on a daily basis Dr Gram Mutandi, who is based at both the MoHSS and the CDC GAP office. At CDC, the team also includes Claire Dillavou, MPH, the program's data manager. Dr Ndapewa Hamunime leads the team from the MoHSS. Additional support is provided at MoHSS by Ms Francina Kaindjee-Tjituka, Ms. Ria Bock, Ms Annatjie Tobias and Ms. Wilhemina Kafita.◆

TB SCREENING/IPT ASSESSMENT FORM

YES	SYMPTOMS	NO
	Cough	
	Fever	
	Night Sweats	
	Lymp node enlargements	
	CONTRAINDICATIONS	
	Chronic alcoholism	
	Presence of liver disease	
	Terminal AIDS	
	Hypersensitivity to INH	
	TB treatment in last 2 years	

Conclusion:

1. Eligible: ..... Date Commenced: .....
2. Not eligible ..... Date of screening .....



***Top*: On-site training for data collection at the facility level.**
***Middle*: A checklist created as part of a QI Project to improve TB screening and IPT rates. The checklist is now attached to all patient files .**
***Bottom*: National-level aggregate data for the first round of data collection at 16 pilot sites in Namibia.**

HIVQUAL INTERNATIONAL NEWS BRIEFS

In late July, a delegation from **Guyana** traveled to Seattle, WA to participate in a three-day Training-of-Trainers session. The TOT was followed by a week-long Study Tour in New York City.

In August, a delegation from **Botswana** also participated in a New York Study Tour. The visitors included representatives from the Ministry of Health, the Ministry of Local Government, and UNICEF.

HIVQUAL-Uganda is headed at full speed towards a third data collection and expansion to 60 additional sites, including pediatric care.

What's new with HIVQUAL-T?

Pediatric Program Update

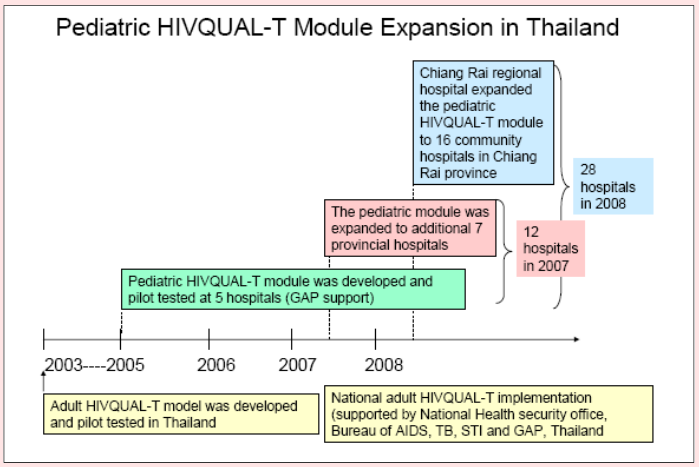
The HIVQUAL model was adapted and implemented in Thailand beginning in 2003. After successful pilot implementation for adult HIV care, the CDC Global AIDS Program (GAP), along with the National Health Security Office (NHSO) and Ministry of Public Health (MOPH) in Thailand expanded HIVQUAL from 12 hospitals to 140 hospitals in 2007. National scale-up for the adult HIVQUAL-T program to 914 hospitals is underway for 2008.

HIVQUAL-T Pediatrics was launched in 2005. The expansion to pediatric HIV care was spearheaded by Dr Rangsima Lolekha. HIVQUAL-T Pediatrics is a collaboration between the Thai Bureau of AIDS, TB and STIs, the MOPH and CDC-GAP. Originally piloted at 5 hospitals, the pediatric program has since been expanded to 28 sites.

At the original five pilot sites, the program has already produced results in several indicators. The baseline data in 2005 showed adherence monitoring at one pilot site to be less than 70%. The hospital then identified this as a priority quality improvement area, and initiated a variety of QI activities from staff trainings to the implementation of a standard adherence record form. Adherence assessments are now at more than 90% at this hospital.

In addition to improvements in adherence monitoring, significant improvement was found at the 5 pilot sites in CMV retinitis screening. The median percent who received CMV retinitis screening at baseline measurement in 2005 was 0%. In 2006 this rose to 67%, and by 2007 the median rate across the 5 hospitals was found to be 100%. To improve performance, guidelines in CMV retinitis screening were given to health providers at the sites. Visual acuity screening tests were also routinely given to patients with low CD4 counts and those with abnormal results were referred to an ophthalmologist.

The pediatric HIVQUAL-T module is led by the MOPH and GAP-Thailand team. The team from the MOPH includes Dr. Sanchai Chasombat and Chuenkamol Setthabut. At GAP Thailand, the team includes Dr. Rangsima Lolekha, Worowan Faikratok and Suchin Chunwimaleung. Consultants to the pediatric program are Dr. Michelle McConnell (GAP) and Dr. Kimberly Fox (GAP). ◆



Updates from HIVQUAL-US

Learn more about HIVQUAL…

Biennial Advisory Committee Meeting held in Washington, DC

On August 24th 2008, the HIVQUAL-US Advisory Committee Meeting was held in Washington, DC. Attended by more than 30 HIV specialist clinicians, the event stimulated important discussions amongst the experts on the ever-growing HIVQUAL program within the United States. Discussion focused on evolving priorities for quality improvement in HIV care. Several didactic presentations were made highlighting current issues in quality improvement. The meeting was held just prior to the 2008 Health Resources and Services Administration Ryan White Act All-Grantees Meeting, which brings together representatives from federally funded HIV care programs throughout the United States. ◆

Regional Groups Update: Eastern Pennsylvania

The Eastern Pennsylvania Regional Group is a multidisciplinary gathering of representatives from nine healthcare facilities in the region. The group meets face-to-face on a quarterly basis (with conference calls in the interim), to discuss their quality programs, share best practices, and receive guidance from HIVQUAL QI Consultant Dr. Nanette Brey Magnani who facilitates the group. Represented in the group are eight hospitals and one community health center; the majority of participants nurse practitioners, with one data manager and QI Director who is also a consumer. In recent months, the group has been focusing on HIV health literacy among patients. In August, "Teach Back" methodology was discussed in which providers ask patients to repeat back the health information they have been taught to ensure patient understanding. In October, the group is planning to revise all of their education materials due to the low level of literacy found among many patients. ◆

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HIVQUAL International is supported through the U.S. Department of Health and Human Services, Health Resources and Services Administration as the International Quality Center for PEPFAR and through funding from UNICEF.

For more information on the *HIVQUAL International Update*, please contact Marion Billings at mab24@health.state.ny.us.

The HIVQUAL International Update

HIVQUAL International offers a simple, systematic strategy for building capacity to improve quality of HIV care. Using a performance measurement strategy based on a sampling methodology, HIVQUAL facilitates the process of data collection and reporting to improve quality.

November 2008 *Volume I, Issue 4*

COUNTRY PROFILE: HIVQUAL-Nigeria Speeds Ahead in First 18 Months

Strong commitment from federal government; Patient involvement in QI

In July 2007, HIVQUAL-Nigeria shifted into high gear with a series of high-level meetings between the Nigeria Federal Ministry of Health, CDC-Nigeria and HIVQUAL. Meetings were held to gain support and involvement from the National Guidelines Committee, key stakeholders, partner organizations, providers, and patients living with HIV/AIDS. With strong support at the national level, plans moved ahead quickly in the following weeks with the development of indicators, initiation of training sessions for key FMoH, CDC and facility staff, and data collection activities.

Located in West Africa, Nigeria is the largest country on the continent with a population of nearly 150 million – nearly a quarter of the population of Africa. Nigeria has an estimated adult HIV prevalence of approximately three percent, with 2.6 million Nigerians thought to be currently living with HIV/AIDS. Nigeria has the second highest number of individuals infected with HIV in the world, after South Africa.

With its large population and roughly 300 facilities providing HIV care throughout the country, HIVQUAL-Nigeria has been pushed forward thanks to strong central leadership. Dedicated participation from the FMoH is thanks to the firm commitments of the former and current Directors for Public Health, Dr. Ngozi Njepuome and Dr. Abdulsalam Nasidi, respectively.

With substantial momentum at the national level, indicators were promptly finalized. Within several months, trainings were held with representatives from all 20 pilot sites. Sites were chosen collaboratively by the FMoH and CDC-Nigeria, and were selected to represent all six geopolitical zones and a variety of stakeholders including facilities supported by implementing partners, the FMOH, and the Nigeria Department of Defense.

The HIVQUAL team visits Jos Univ. Teaching Hospital in November, 2007.

Banner announcing the 3-day HIVQUAL training held in November, 2007

Reflecting an important priority of HIVQUAL-Nigeria and the FMoH, a commitment has been made to also involve patients in quality improvement and the implementation of HIVQUAL. In November 2007, two workshops were held for patient representatives and advocates to learn more about quality improvement and identify ways to empower patients to partner with their health care providers.

The first workshop with patients focused on basic quality improvement training, and served as an opportunity to gain their input for setting quality improvement priorities in Nigeria. Key issues identified by the patients were empowerment, stigma, quality of care, consumer involvement, rural access to care and the cost of care. Participants also expressed that patients needed to be more involved in their care at the national policy level as well as at the regional and facility level. The second workshop focused on patient empowerment, aiming to provide participants with the skills to actively involve themselves in the quality of their health care.

In November 2007, trainings were also held for staff representatives of the pilot sites, equipping facility teams with quality improvement and data collection skills in preparation for the first round of data col-

continued on page 3

HIVQUAL-NIGERIA: SPOTLIGHT

University College Hospital—Ibadan

The University College Hospital is affiliated with the University of Ibadan, one of Nigeria's premier and oldest institutions of higher learning. Located in Oyo State, approximately 100 kilometers north of Lagos, Ibadan is home to more than 2.5 million people. In addition to its affiliation with the University, UCH receives support for its HIV/AIDS program from Harvard University's APIN+ program, a PEPFAR implementing partner.

As one of the initial 20 pilot sites for the HIVQUAL-Nigeria, UCH has benefited considerably from participating in the program. In particular, waiting times for patients have been reduced thanks to improvements in provider schedules and appointment procedures. Patients have also become more involved in quality-related activities, and staff have become routinely engaged in continuous quality improvement.

After reviewing data from the first round of data collection, UCH identified several key areas for improvement, including CD4 monitoring and continuity of care for patients not receiving ART. To improve performance on both of these indicators, a multi-pronged approach was developed by the staff. To encourage patient attendance for appointments, waiting times at the facility have been reduced and counselors routinely remind patients by telephone of upcoming appointments. For CD4 monitoring in particular, staff use the laboratory database to track patients due for upcoming labs.

The interventions have been successful largely due to the commitment and buy-in of the staff, gained by the multidisciplinary quality improvement project team that includes patients, counselors, support group staff and data officers, in addition to clinical and laboratory providers. Significant improvements have been observed: the number of patients (both ART and non-ART) attending appointments every six months has increased, as has the number of CD4 laboratory tests performed at the hospital. In particular, CD4 monitoring for non-ART patients has improved from 71% to 80% in just a few months.◆

HIVQUAL-Nigeria pilot sites (blue) including UCH-Ibadan (red).

FACES OF HIVQUAL: Suchin Chunwimaleung, *Programmer*

Suchin Chunwimaleung is a computer systems analyst at the Thailand Ministry of Public Health, part of a joint collaboration between the MOPH and CDC-Thailand. In 2003, Suchin programmed the MS-Access software for HIVQUAL-T as part of the pilot implementation of HIVQUAL International. In 2004 HIVQUAL-T began in 12 sites, and has now expanded to more than 900 hospitals as the program has been completely integrated into the Thai healthcare system. Suchin has been responsible for updates each year to the software, and provides technical support to all participating sites. The current version of the software allows for the customization of 3 indicators, automatically generates reports and benchmark comparisons, and can also import large patient case lists from Microsoft Excel to aid in the data collection process.

In 2006, Suchin also adapted the HIVQUAL software for HIVQUAL-Uganda. HIVQUAL-Uganda is currently planning for its third round data collection, and is expanding to additional sites in Northern Uganda and to pediatric care. Suchin continues to provide technical support for the HIVQUAL-Uganda software.

Suchin received his bachelor's degree in computer science from Dhonburi Rajabhat University in Bangkok, and has also completed a master's degree in information technology from Eastern Asia Univeristy in Pathumthani, Thailand. Previously he has worked as a computer programmer in the real estate and legal industries. ◆

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HIVQUAL-Nigeria Profile

lection. Site representatives were trained in sampling techniques, data analysis and usage of the HIVQUAL-Nigeria software.

In January 2008, six teams were assembled at the central level to travel to all 20 pilot sites for organizational assessments (OAs). The teams included representatives from the FMoH, CDC and partner organizations. Each was dispatched to one of the six geopolitical zones in Nigeria. For more on OAs, see the *Methods* box below.

The OAs provided the central team with crucial baseline information about the quality improvement infrastructure at each site, including their readiness to participate in the pilot. On-site trainings were also conducted during the visits to supplement the November workshops, and to continue preparations for the data collection process.

The customized HIVQUAL-Nigeria software was developed by HIVQUAL programmer Hugh Dai, MD. In total, more than 4,000 records were reviewed for the first round of data collection. Once abstracted, data were entered into the HIVQUAL software. Reports were emailed to the central team at the FMoH, led by Dr Aderemi Azeez.

The first round of data collection was completed in early 2008, and in May meetings were held to report back on the data to all stakeholders, including partner organizations, Nigerian and US government personnel as well as patient providers and facility representatives. Participants engaged in productive discussions on the data findings, exploring causes for both low and high scores as well as modifications to the indicator definitions and the software for the second round of data collection.

Participating facilities are now engaging in quality improvement activities, and preparations are underway for the second round of data collection which is slated for completion before the end of the year.

HIVQUAL QI Methods: Organizational Assessment

The HIVQUAL Organizational Assessment Tool is used to objectively assess the quality infrastructure in clinics, and to target areas for development and improvement. Explicit scoring criteria have been developed for the tool, which can also be used for self-assessment by the facility. To download a copy of the HIVQUAL International OA, go to www.http://hivguidelines.org/Content.aspx?pageID=741

The team visits General Hospital Kafanchan in Kaduna state.

Participation in HIVQUAL has encouraged facilities to implement a variety of specific improvements based on the results of the first data collection, in addition to forming engaged and quality improvement teams to implement the projects and promote a continuous QI focus amongst all staff. In many cases, teams have also included patient representatives.

At General Hospital Kafanchan in Kaduna state, a quality committee has been established to review performance. One key area targeted was patient waiting time – a factor that can impact a number of clinical indicators such as continuity of care and CD4 monitoring. Thanks to their participation, the facility reports that the ART team now considers quality an achievable and sustainable goal, and has been able to improve and streamline much of their work.

At Jos University Teaching Hospital in Plateau state, quality is now addressed at weekly in-house general seminars to ensure that all staff members are focused on improving patient care. Areas targeted for improvement since the first data collection include cotrimoxazole prophylaxis, continuity of care for patients on ART and ART provision for eligible patients. For a detailed description of the QI activities implemented at one participating pilot site, please see the "Spotlight" boxed feature on page 2.

Dr. Alozie Ananaba of CDC-Nigeria, key leader in the pilot phase of HIVQUAL-Nigeria.

By early 2009, the team is planning to expand HIVQUAL-Nigeria from the original 20 pilot sites to an additional 40 facilities. Plans are also ongoing for a Nigeria Training-of-Trainers (TOT) workshop to be held in the coming months. The 3-5 day TOT will equip participants with the necessary skills to hold their own QI trainings, catalyzing the spread of the HIVQUAL model and basic QI methodologies to facilities and providers throughout Nigeria.

HIVQUAL-Nigeria is coordinated at CDC-Nigeria by Dr. Ahmad Aliyu (Program Specialist, Monitoring and Evaluation) and Dr. Ebunoluwa Jaiyesimi (Program Specialist, Care and Treatment), with leadership from Dr. Nancy Knight, Country Director. Additional support is provided by Dr. Karen Hawkins-Reed, Associate Director for Program Monitoring. During the pilot phase of the program, instrumental assistance and coordination was also provided by Dr. Alozie Ananaba, Dr. John Vertefeuille and Dr. Nasir Sani-Gwarzo. Dr. Seymour Williams of CDC-GAP in Atlanta has also provided essential support.

At the FMoH, coordination is provided by Dr. Aderemi Azeez (Head, Monitoring and Evaluation Unit, National AIDS/STDs Control Programme), Dr. Ganiyu Jamiyu (HIVQUAL Focal Point, NASCP) and Dr. E.B.A Coker (Head, HIV/AIDS Division). ◆

HIVQUAL INTERNATIONAL NEWS BRIEFS

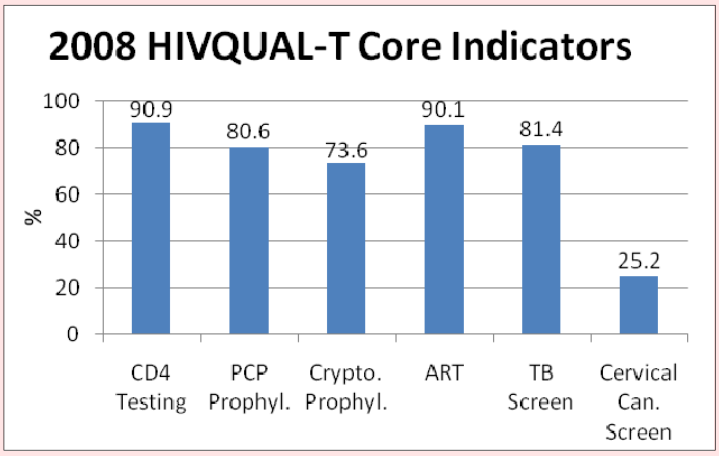
HIVQUAL-Haiti has completed its first round of data collection. The team is also currently preparing for a New York City Study Tour in December. **HEALTHQUAL-Guyana** held its first software training in October, in preparation for its first round of data collection. **HIVQUAL-Uganda** has completed its first round of data collection at newly added pediatric sites. Pediatric indicators include core clinical measures (CD4 monitoring, continuity of care, PCP prophylaxis) as well as malaria prevention, growth monitoring and referral from PMTCT. ◆

What's new with HIVQUAL-T? 2008 *Expansion and scale-up*

HIVQUAL-T began in full force in 2004, with a first round of data collection conducted in 12 pilot sites. Since then, HIVQUAL-T has been integrated into the national health system, and an expansion to a targeted 914 sites is currently underway.

As of August, 2008, a staggering 734 hospitals in 12 regions have received training in HIVQUAL, and 514 of these have completed and submitted a round of data collection. Please see below for a summary of the rapid scale-up of HIVQUAL-T since planning began in 2003.

Across the 550 sites that have submitted data, performance on many key indicators is strong. For example, coverage for CD4 testing was found to be 90.9%, and 90.1% of eligible patients are receiving ART. ◆



Updates from HIVQUAL-US
Learn more about HIVQUAL…

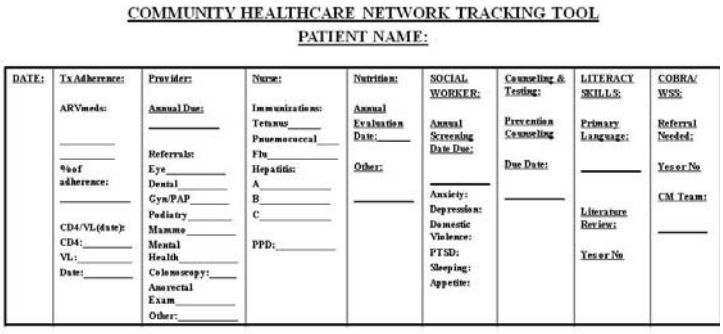
2008 Data Submission Update

With the development and release of the new HIVQUAL software in April-May 2008, data collection and submission began almost immediately at HIVQUAL-US participating sites across the nation. As of 27 October, 162 facilities in 30 states and territories (including Puerto Rico and Washington, DC) have submitted data.

Technical support for the new software and the data collection process is provided by HIVQUAL-US Data Manager Chris Wells. Sites that have encountered problems with their data submission or who have submitted incomplete data have received individual support and assistance. Sites that need additional help have also received support from HIVQUAL Consultants assigned to the site, who provide ongoing support to sites through coaching and mentoring through all phases of the HIVQUAL model for quality management, including performance measurement, quality improvement, and the establishment of a lasting quality management infrastructure. A final national-level report of the data is currently in preparation, to be completed in the coming months. ◆

Creating a Multidisciplinary QI Team: An Example

In an effort to achieve 25% improvement across all HIVQUAL-US clinical indicators, the Community Healthcare Network established multidisciplinary HIV Teams at its clinic sites throughout New York City. Team members consist of individuals from a wide variety of disciplines, ranging from treatment adherence counselors, nutritionists, social workers, case managers, nurses and medical providers. The teams meet prior to clinic sessions to discuss all patients with medical appointments for that date. Each patient is reviewed using an HIV Tracking Tool document that includes fields for all HIVQUAL indicators. Specific patient needs are discussed, and medical providers are made aware of key reasons for the patient's visit such as needed lab work or pharmacy refills. The meeting only takes between 5 and 15 minutes, adding only minimal burden to staff time. Since implementation of the HIV Team model in 2006, clinical indicators have improved between 7% and 100%. ◆


COMMUNITY HEALTHCARE NETWORK TRACKING TOOL

PATIENT NAME:

DATE:	Tx Adherence:	Provider:	Nurse:	Nutrition:	SOCIAL WORKER:	Counseling & Testing:	LITERACY SKILLS:	COBRA/ WSS:
	ARVmeds:	Annual Due:	Immunizations:	Annual Evaluation Date:	Annual Screening Date Due:	Prevention Counseling	Primary Language:	Referral Needed:
	%of adherence:	Referrals:	Tetanus	Other:	Anxiety:	Due Date:	Literature Review:	Yes or No
	CD4/VL(date):	Eye	Pneumococcal		Depression:		Yes or No	CM Team:
	CD4:	Dental	Flu		Domestic Violence:			
	VL:	Gyn/PAP	Hepatitis:		PTSD:			
	Date:	Podiatry	A		Sleeping:			
		Mammo	B		Appetite:			
		Mental Health	C					
		Colonoscopy:	PPD:					
		Anorectal Exam						
		Other:						

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HIVQUAL International is supported through the U.S. Department of Health and Human Services, Health Resources and Services Administration as the International Quality Center for PEPFAR and through funding from UNICEF.

For more information on the *HIVQUAL International Update*, please contact Marion Billings at mab24@health.state.ny.us.

The HEALTHQUAL Update

From HIVQUAL International

SPECIAL ISSUE: PEDIATRIC CARE

In collaboration with... unicef

Autumn 2008 ***Volume I, Issue S1***

Expanding HIVQUAL for Pediatric ARV Rollout and PMTCT; Introducing HEALTHQUAL-Guyana for QI in Well-Child Care

HIV/AIDS is one of the top 10 leading causes of mortality in children under the age of five. Sub-Saharan Africa bears the largest burden, with the vast majority of under-five deaths due to HIV/AIDS occurring there. Great advances have been made to extend care and treatment services to infants and children exposed, infected or affected by HIV in resource-limited settings. In just a few years, pediatric HIV care and treatment programs have been established in most African nations and thousands of children are currently receiving HIV-related services from birth through adolescence. Nonetheless, further expansion of efforts to reach more children with prevention, care and treatment services is needed. As programs grow so will the needs to ensure the quality and impact of services provided.

As evidence grows for the importance of early treatment, it is essential that HIV-infected children and infants are identified and treated as soon as possible. Recent data from the South African CHER (Children with HIV Early Antiretroviral Therapy) Study have shown that HIV-infected infants who receive ART as soon as they have been diagnosed are 76% less likely to die than those who received treatment only once the disease had progressed. Using the HIVQUAL framework for QI, HEALTHQUAL helps to assure the highest quality of care as access to ART is expanded for pediatric patients across the globe.*

Mortality from HIV, however, is just the tip of the iceberg. Far more children die each year in the developing world from simple, preventable causes such as pneumonia, diarrhea and neonatal complications at birth. The need for high quality, accessible well-child care throughout the developing world is paramount. Assuring that the best possible care is given to all children is essential to improve the health of populations across the globe.

Through well-established methods to build capacity for quality management in government agencies, HEALTHQUAL is collaborating with UNICEF to develop and enhance sustainable country-owned national quality management programs that are designed to improve the quality of care for children, including those living with or exposed to HIV. UNICEF has been working in parallel with PEPFAR to support the implementation of diagnosis, care and treatment programs and has also supported HIVQUAL in several countries. In this issue we highlight efforts to assess the quality of health services for children and present examples of ongoing HIVQUAL programs in three countries: Uganda, Guyana and Thailand. These examples showcase countries with very different epidemics, resources, infrastructures and patient volumes and highlight the flexibility and adaptability of HIVQUAL.

* Violari A, et al. "Early Antiretroviral Therapy and Mortality among HIV-Infected Infants." NEJM, 20078 359;21:2233-2244.

Uganda Completes First Round of Data Collection at 20 Pediatric Sites

After a successful first round of data collection in late 2006, plans began to form for a large expansion of HIVQUAL-Uganda beyond the original 20 sites of the first phase. Among the 80 expansion sites ultimately chosen, 20 were pediatric care facilities in the Northern part of Uganda, an area that had until recently been ravaged by a decades-long civil war. With the addition of these sites in the North and a new pediatric component supported by UNICEF, HIVQUAL-Uganda is an example of major donor collaboration between PEPFAR and UNICEF.

As pediatric sites were being selected, indicators specific to pediatric care were developed by key stakeholders and leading Ugandan pediatricians. A meeting convened by the Ministry of Health AIDS Control Program was facilitated by Dr. Bruce Agins of HIVQUAL International, Dr. Godfrey Kayita of HIVQUAL-Uganda and Dr. Rangsima Lolekha of HIVQUAL-T from CDC-GAP Thailand (TUC). Six clinical areas were retained from the adult module and adapted for pediatric care: continuity of care, CD4 monitoring, cotrimoxazole prophylaxis, ART, adherence assessment, and TB screening and treatment. New indicators unique to pediatric care were: growth monitoring, malaria prevention and referral from PMTCT. Optional indicators include immunization coverage and disclosure of HIV status among patients >8 years.

HIVQUAL-Uganda Pediatric QI Projects:

- CD4 Monitoring (8 sites)
- TB Screening (3 sites)
- ARV Therapy(3 sites)
- Growth Monitoring (2 sites)
- Prevention Education (2 sites)
- Cotrimoxazole Prophylaxis (2 sites)

The first round of pediatric data was collected in January 2008. Representatives from each of the 20 pediatric facilities received QI training from the HIVQUAL-Uganda team (Dr. Kayita, Julius Ssendiwala and Prosper Behumbiize), a few months later, during which staff members were guided through the baseline data collection methodology and the process of selecting QI projects based on their data. Many sites chose to focus on improving CD4 monitoring, however some chose other areas such as growth

continued on page 4

HIVQUAL-T Pediatric Program Plans for National Level Expansion and Scale-Up

Pediatric HIVQUAL-T began in 2006 with 5 pilot sites at tertiary care hospitals in Thailand. Support was provided by CDC-GAP, and in 2007 the program was expanded to 12 sites, with additional key involvement and support from the Thai Ministry of Public Health (MOPH).

In 2008, the program was expanded to 16 community hospitals, and plans are underway for further expansion in 2009 to 6 additional tertiary care hospitals and 9 more community hospitals. After 2009, all 100 provincial hospitals with high numbers of pediatric cases will be targeted.

Performance measurement for pediatric HIVQUAL-T is conducted once a year; QI activities are planned annually following performance measurement reports. In August and September 2008, HIVQUAL-T workshops were held to share 2007 performance measurement results for Bangkok and Chiang Rai province. The pediatric workshops were attended by 154 different health care professionals including 34 doctors, 36 pharmacists, 46 nurses, 18 public health officers and 25 others. The multidisciplinary attendees shared QI topics, activities, and materials used in their QI work.

Since 2005, a number of successful QI projects have been implemented at participating pediatric sites, ranging from improving immunization coverage to assessing dental health for children living with HIV/AIDS. At Queen Sirikit National Institute of Child Health, the rate of HIV-infected children receiving an assessment of whether or not their immunizations are up to date rose from 8% to 100% between 2005 and 2006. Improvements implemented ranged from adding an immunization variable to the medical record form to reminding patients to bring their vaccine book to all visits. Performance measurement results were also reviewed at weekly staff meetings to continually motivate staff. At Siriraj Hospital, the proportion of HIV-infected children with abnormal oral health receiving appropriate treatment rose from 41% to 100% between 2005 and 2006, thanks also to a wide variety of QI activities: educational materials on oral health were developed for the clinic, a visiting dentist was brought in to conduct dental education classes, and fluoride was given to patients. Also, a "teeth beauty contest" was held in the HIV clinic for the children twice a year. Finally, review of performance measurement results was integrated into routine staff meetings.

The scale-up of pediatric HIVQUAL-T represents integration of the approach into the Thai national health system, and successful coordination between the Thailand National Health Security Office (NHSO), the MOPH and the Institute of Hospital Quality Improvement and Accreditation (IHQIA). Integration with adult HIVQUAL-T as a national program is currently being discussed, particularly in the context of the upcoming expansion to all provincial hospitals with high pediatric caseloads. As pediatric HIVQUAL-T continues to grow, cross-organizational collaboration will be essential. As the

continued on page 3

HIVQUAL-T PEDIATRIC INDICATORS	
Monitoring HIV Status	Continuity of care
	Clinical staging
	Immunological monitoring
	Viral load monitoring
Primary OI Prophylaxis	PCP primary prophylaxis
	MAC primary prophylaxis
	CMV retinitis screening
ARV Therapy	ART
	Adherence Assessment
	Management of treatment failure
	Lipid monitoring
	Management if abnormal lipid profile
	Resistance testing (if treatment failure)
TB Screening and Treatment	TB contact history screening
	TB clinical screening
	PPD screening (if contact or symptoms)
	CXR screening (if contact or symptoms)
	INH prophylaxis (if history or latent infection)
	Proper TB treatment
Immunization Assessment	Assessment of immunization status
	Vaccinations according to guidelines
Growth and Development Monitoring	Weight for age assessment
	Treatment if weight for age < 10th percentile
	Height for age assessment
	Developmental assessment
	Intervention if delayed development
	Secondary sexual characteristic assessment
	Sexual risk assessment of sex education
Oral Health Care Assessment	Oral health assessment
	Treatment for abnormal oral health
Psychosocial Issues	Children ≥7 years of age in school
	Disclosure, children ≥10 years of age

TOP: patients are asked to bring their vaccine book to each visit at Queen Sirikit Nat. Inst. of Child Health. BOTTOM: A class on dental health for children and caretakers at Siriraj Hospital.

HEALTHQUAL-Guyana Gears Up for Indicator Development, 1st Data Collection

HEALTHQUAL-Guyana represents the first adaptation of the HIVQUAL framework beyond HIV care during its initial phase, and has been supported by UNICEF and CDC-Guyana.

Begun in 2008, the mission of the HEALTHQUAL-Guyana program is to improve the quality of child healthcare, including HIV care, in Guyana by building capacity for quality management. Led by the Guyana National AIDS Programme Secretariat (NAPS), and guided by a steering committee composed of representatives from the Bureau of Maternal Child Health, UNICEF, CDC-Guyana and FXB-Guyana, the program is moving rapidly through its first phase. A set of indicators has been developed for use in pediatric settings that will be used to measure the quality of well-child care. For all children, including those not infected with HIV, four well-child care indicators have been developed: clinical visits, growth monitoring, assessment of developmental milestones and vaccination coverage. Additional indicators used for children infected with HIV include CD4 monitoring, ART, adherence assessment, cotrimoxazole prophylaxis, TB screening and general medical care which includes routine measurement and documentation of vital signs.

In October 2008, a two-day training was held for representatives of the 20 participating sites to review the HIVQUAL framework, and to train participants in case list generation, sampling, and chart abstraction, as well as use of the HEALTHQUAL-Guyana software for data entry and report generation. Data transfer procedures were also outlined for the secure and orderly submission of data from the sites to the central team. The training, led by HEALTHQUAL's Charley Borden, in collaboration with the MOH, was a hands-on session designed to build capacity amongst facility staff. The first round of data collection is underway, with results expected in the coming months.

HEALTHQUAL-GUYANA INDICATORS	
Clinical Visits	All Patients
Growth Monitoring: Weight	Well-Child (Less than 5 years of age, including exposed infants and confirmed HIV-infected children)
Growth Monitoring: Height/Length	
Growth Monitoring: Head Circumf.	
Growth Monitoring: Weight for Age	
Developmental Milestones	
Vaccinations	
CD4 Monitoring	All HIV infected children and exposed infants
ART	
Adherence Assessment	
Cotrmixazole prophyaxis	
TB Screening	
General Medical Care	

Rosignol Health Centre, a primary health care facility providing MCH and PMTCT in Rosignol, Guyana

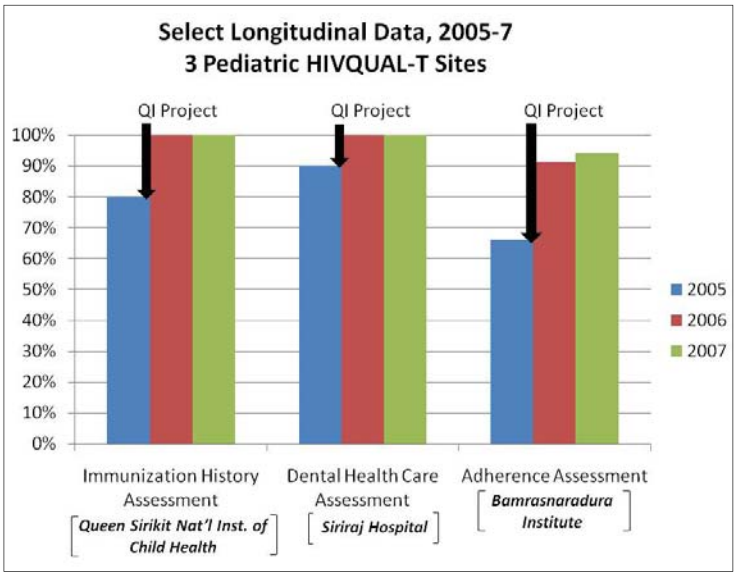
continued from page 2

HIVQUAL-T-PEDS

main payor for healthcare in Thailand, the NHSO provides the budget, policy support and oversight for ensuring quality in HIV care. The MOPH provides technical leadership, training, monitoring and supervision for the pro--gram, whereas IHQIA provides technical assistance for QI training networks in Thailand. Also, TUC, the collaboration between the US Centers for Disease Control and Prevention (GAP Thailand) and the Ministry of Public Health provides technical support to the MOPH to strengthen the quality of HIV programs. As part of the HIVQUAL-T model, provincial health offices also sponsor regional QI meetings where providers discuss their experiences with one another.

HIVQUAL-T-PEDS is led by the MOPH with support from GAP-Thailand. The team from the MOPH includes Dr. Sanchai Chasombat and Chuenkamol Setthabut, with assistance from Dr. Peeramon Ningsanond. At GAP, the team includes Dr. Rangsima Lolekha, Worawan Faikratok and Suchin Chunwimaleung. Consultants to the pediatric program are Drs. Michelle McConnell, Kimberley Fox and Philip Mock of GAP. Also essential to the program are the many pediatricians and nurses at the participating pediatric hospitals.

As the first country outside the US to implement HIVQUAL, Thailand continues to move towards total integration of HIVQUAL-T into the national health system. The expansion into pediatric care further spreads the HIVQUAL framework, building capacity for continuous quality improvement throughout Thailand.



HIVQUAL-Uganda

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monitoring, ART, cotrimoxazole prophylaxis, prevention education and TB screening. Clinic teams are currently working to implement their QI projects, with support from UNICEF for their QI activities and guidance from district-level teams. Thanks to this support, district health teams will visit sites once a month for coaching and mentoring, building capacity for a QI infrastructure both at the facility level and the district health system level.

Quality Improvement Projects:

At Kalongo Hospital, situated along the border with Sudan in the district of Pader, the newly formed QI committee decided to focus their QI activities on growth monitoring after reviewing their baseline data. Growth monitoring cards were established for the charts of all patients under the age of 5 to encourage monitoring and documentation. All ART providers and community health workers were sensitized to the importance of growth monitoring, and were trained in chart plotting, childhood weight-for-age calculations and interpretations. Referral systems were also strengthened for those in need of nutritional support as community workers were guided to emphasize nutrition education in their work with mothers. The dedicated team at Kalongo Hospital is looking forward to the next round of data collection to determine the impact of their quality improvement project.

At Lacor Hospital in Gulu District, the ART clinic is currently serving more than 5,000 adult patients and over 2,000 pediatric patients. After the first round of data collection, the team was surprised at their low rates of TB assessment. A QI team was formed, and the group tackled TB assessment from a variety of angles after identifying all possible causes for their low performance. The clinical team was retrained on these topics, reinforcing MOH guidelines. Documentation of all clinical activities was also emphasized. Clients were also sensitized to the importance of assessment and screening. A TB coordinator or focal person was identified at the facility, as HIV-TB collaboration activities were strengthened. The clinic also conducted community outreach activities to further educate patients and community members. Regular meetings are ongoing and keep the QI team updated on progress. The clinic has collected their follow-up data and demonstrated marked improvements across multiple indicators, including TB assessment which rose from zero to 50%.

With more than 100,000 children estimated to be living with HIV/AIDS in Uganda, the expansion of HIVQUAL to pediatric sites is a crucial part of the continued rollout of ART throughout Uganda. Expansion to sites in Northern Uganda also represents an important milestone, as many sites in the region have only recently been able to operate under reasonable levels of security due to instability and civil war.

Poster advertising free ARVs for children in Uganda.

HIVQUAL-UGANDA PEDIATRIC INDICATORS

INDICATOR	DESCRIPTION
Continuity of Care	Proportion of HIV+ children who have had at least one clinical visit during the last 3 months
Monitoring HIV Status	Proportion of HIV+ children receiving a CD4 test in the past 6 months
Growth Monitoring	Proportion of HIV+ children receiving weight for age assessment every 3 months.
	Proportion of HIV+ children with weight for age less than 25th percentile receiving nutritional support
Cotrimoxazole Prophylaxis	Proportion of HIV+ children receiving cotrimoxazole during the last 6 months
Malaria Preven.	Proportion of HIV children using insecticide-treated materials during the last 6 months.
Referral from PMTCT to Care	Proportion of new HIV-exposed or infected infants at HIV clinic who were referred from PMTCT clinic
ART	Proportion of HIV+ children receiving ART who meet MoH clinical and immunologic eligibility criteria
Adherence Assessment	Proportion of HIV+ children on ART who have had an adherence assessment in the last 6 months
TB Screening and Treatment	History: proportion of HIV+ children who have been screened for history of TB contact or symptoms during the last 6 months
	Lab screening: proportion of HIV+ children with history of TB contact or withTB symptoms receiving appropriate TB investigation during the last 6 months
	Treatment: proportion of HIV+ children with TB disease receiving TB treatment or referred for treatment
	Coordination: proportion of children whose HIV and TB medications are documented in the HIV record.
Immunization (Optional)	Proportion of HIV+ children who areu p to date with immunizations base don their age at time of review and MOH EPI guidelines
Psychosocial assessment	Disclosure: proportion of HIV+ children aged ≥8 yrs who were disclosed their HIV status
	Sex education: proportion of HIV children aged ≥8 yrs receiving sex education at the clinic
	School attendance: proportion of HIV children ≥ 6 yrs who are attending school
	Discrimination at school: proportion of HIV children ≥6 yrs for whom HIV discrimination in school was assessed during the last 6 months

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The HIVQUAL International Update

HIVQUAL International offers a simple, systematic strategy for building capacity to improve quality of HIV care. Using a performance measurement strategy based on a sampling methodology, HIVQUAL facilitates the process of data collection and reporting to improve quality.

COUNTRY PROFILE: HAITI **February 2009** ***Volume II, Issue 1***

Team succeeds in the face of destruction after the 2008 hurricane season; Performance measurement process is facilitated by nation-wide EMR system

With the third highest HIV/AIDS prevalence in the western hemisphere, Haiti has confronted a severe epidemic for many years. The first cases of AIDS in Haiti were reported in the early 1980s, and today an estimated 190,000 Haitians are living with HIV/AIDS. Coverage of antiretroviral treatment has expanded considerably in recent years, with more than 20,000 patients receiving ART at 51 sites throughout the country. Adult prevalence is estimated at 2.2%, and is slightly higher among females than males in the 14-49 age group.

HIVQUAL-Haiti began in late 2007, and has moved forward at an impressive pace. In December, 2007, a national-level core team was assembled from the Ministry of Health and Population (MSPP), with support from Dr. Gabriel Thimothe (Director General, MSPP). The team also includes personnel from CDC-Haiti and representatives of some partner organizations. A National Committee was formed, bringing key stakeholders together for regular meetings to develop and discuss the goals of HIVQUAL-Haiti and gain input from diverse partner organizations. Committee members include representatives from AIDS Relief, Family Health International (FHI), GHESKIO (Groupe Haïtien d'Etude du Sarcome de Kaposi et des Infections Opportunistes), IHE, I-TECH, John Snow, Inc (JSI) Management Sciences for Health (MSH) and Partners in Health (PIH), as well as CDC-Haiti, USAID and other US government staff. The committee is convened several times a year by the Ministry of Health, and also includes representatives from Departmental Health Offices. In Haiti, the five Departmental Offices are the decentralized authorities under the MSPP. Each office includes staff for oversight of HIV services for the regions in the Department's catchment area.

The committee's most recent meeting took place in December, 2008 and was attended by patient representative Esther Boucicault Stanislas, of PHAP+ (La Plateforme Haïtienne des Associations des Personnes vivant avec le VIH). PHAP+ is a non-profit organization working to bring together local PLWHA associations throughout Haiti. At the committee meeting, Ms. Boucicault voiced the concerns of PLWHAs and emphasized the need for quality psychosocial services within comprehensive care models.

In collaboration with the National Committee, indicators were developed and defined in early 2008. The HIVQUAL-Haiti indicators include patient retention, CD4 monitoring, ARV therapy, cotrimoxazole prophylaxis, adherence assessment, TB evaluation, and nutritional assessment. With more than 5,000 Haitian children estimated to be HIV positive, and 68,000 orphaned and vulnerable children, the team decided to measure elements of pediatric care in the first round of data collection, including cotrimoxazole prophylaxis and immunizations in children with HIV. The team included an indicator to measure rates of PMTCT prophylaxis.

Once indicators were finalized and agreed upon by the National Committee, the core team held a central HIVQUAL training session for Department and clinic staff. The team also conducted follow-up on-site training sessions at each of the 19 pilot facilities. By the summer of 2008, the participating sites were prepared for the first round of data collection, and the core team had also completed the 19 baseline organizational assessments. August, however, brought

Daniel Lauture, Micheline Louis and Nirva Duval of the core HIVQUAL-Haiti team, during a training session on fishbone diagrams for root cause analysis.

continued on page 2

continued from page 1

HIVQUAL-Haiti Profile

the first of three successive hurricanes and a tropical storm that devastated the country's health care delivery infrastructure.

One pilot site, Hôpital La Providence in Gonaives, was in one of the hardest-hit areas and suffered from severe flooding after Tropical Storm Hanna, forcing abandonment of the hospital building. The coastal city, which was already saturated from rains due to Hurricanes Fay and Gustav, suffered flooding up to 2 meters. Nearly 50,000 people were displaced from their homes into shelters. Overall, more than 600 lives were lost in Haiti during the devastating 2008 hurricane season.

Across the country, MSPP and CDC personnel found their work reprioritized as they were called upon to assist sites coping with structural damage, lack of electricity and an influx of injured patients. Yet despite these challenges, the team was able to reestablish the HIVQUAL-Haiti program with renewed momentum. Within a few weeks, HIVQUAL-Haiti was back on track.

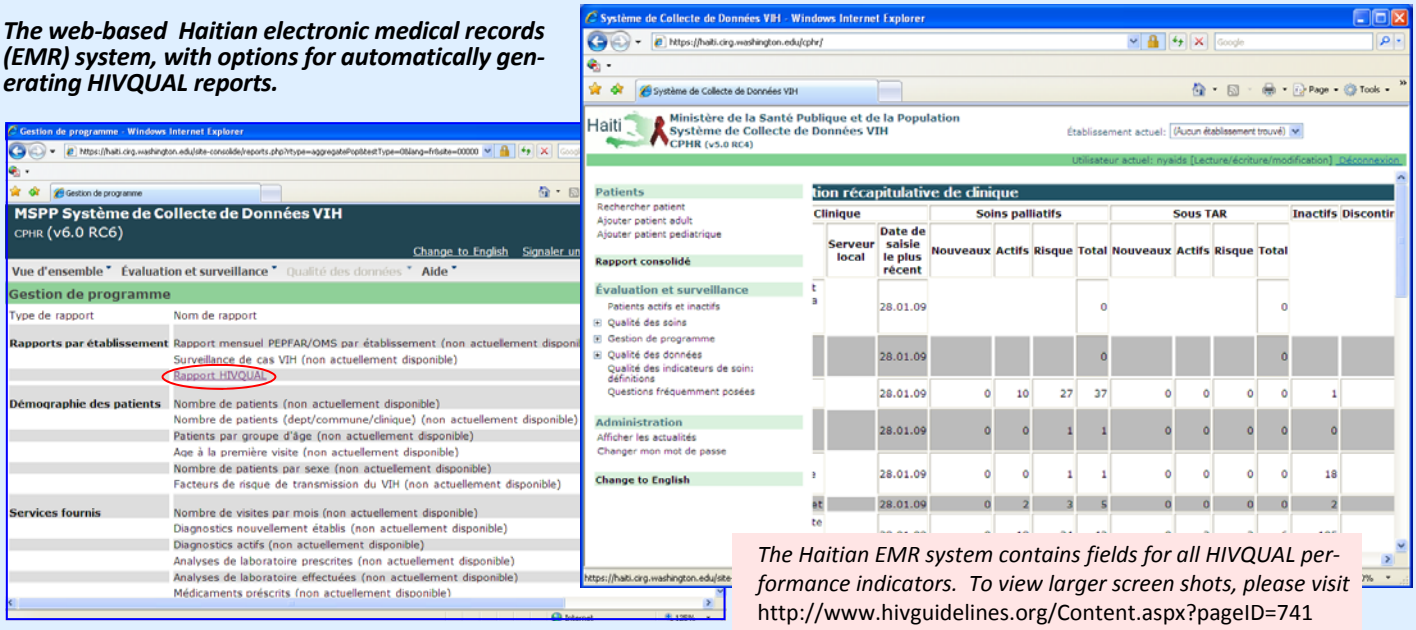
Data collection was facilitated and expedited in large part due to the comprehensive electronic medical records system that was developed by I-TECH and CDC which is now used in clinics throughout Haiti. The system — currently a hybrid of electronic and paper forms designed to accommodate power supply and infrastructure challenges at some sites — can automatically produce data reports on all 10 HIVQUAL performance indicators. In addition, data are collected for all patients, eliminating the need to generate a statistically representative sample. HIVQUAL worked closely with the in-country team, CDC and I-TECH to incorporate functionalities in the EMR to monitor these indicators and allow for automatic report generation. The web-based system allows for the collection of patient data from sites throughout Haiti; users with access clearance can view and print performance reports from any computer with internet access. The resulting seamless integration of HIVQUAL data collection and the national reporting process through the EMR system has eliminated the need for duplicate data entry.

Depending on the information systems infrastructure at each site, data entry can occur either at a computer terminal at the point of care, or via paper form that is later entered into the electronic system by data entry personnel. Paper forms can also be used in the event of a power outage. In addition, some facilities have been equipped for local hosting of the EMR, given frequent outages in internet access. Data can be uploaded to the centralized system periodically whenever a connection is available. Moreover, the system has helped to promote efficient record retrieval and a culture of documentation and measurement, while also accounting for contingencies amidst the infrastructure challenges faced by many facilities in Haiti. *[For more information on the Haitian EMR system, visit www.go2itech.org]*

Hôpital de Lascahobas in the central plateau region, a HIVQUAL participating site supported by Partners in Health.

With the first round of data collection completed, the sites have started improvement projects and are continuously monitoring their performance. For example, the Hôpital Le Providence in Gonaives was able to recover and contribute their data despite severe flooding. Showing their enthusiasm and commitment to quality,

The web-based Haitian electronic medical records (EMR) system, with options for automatically generating HIVQUAL reports.



The Haitian EMR system contains fields for all HIVQUAL performance indicators. To view larger screen shots, please visit http://www.hivguidelines.org/Content.aspx?pageID=741

HIVQUAL-Haiti: Pediatrics and PMTCT

The first round of data collection for HIVQUAL-Haiti included two pediatric indicators and an indicator for the prevention of mother-to-child transmission. Participating facilities currently provide pediatric and PMTCT care in addition to caring for adults with HIV. In addition, HIVQUAL is coordinating with existing QI work by the Haitian Institute for Community Health's (INHSAC) PMTCT Collaborative. ***The indicators and their definitions are described below.***

INDICATOR	DEFINITION
Immunizations	Proportion of children exposed to or infected with HIV who have received adequate vaccinations for their age group. (According to Ministry pediatric standards)
Cotrimoxazole Prophylaxis	Proportion of exposed and infected children having received cotrimoxazole prophylaxis during the past 6 months.
PMTCT	The proportion of HIV-positive pregnant women who have received ARV prophylaxis during the past 6 months.

the staff at Gonaives report that they will utilize the QI techniques they have learned through HIVQUAL to guide them in re-establishing care for their displaced patients at a new site.

As staff at participating sites progress with their QI projects and the next round of data collection, the core HIVQUAL team is working to make coaching and mentoring available through MSPP Departmental staff. Teams of Department-level MSPP and CDC personnel are being formed, which can provide coaching and mentoring to guide facility personnel towards establishing sustainable quality management programs. Plans are being made to engage key stakeholders from partner organizations and clinic networks to develop a diverse and decentralized corps of QI experts throughout Haiti. This approach will also promote regional health unit sponsorship and local peer learning groups. A second centralized HIVQUAL training session for Departmental and site staff is being planned for March, 2009.

The HIVQUAL-Haiti core team includes: Nirva Duval, Dr. Daniel Lauture, Jean Levelt, Micheline Louis (MSPP), Dr. Jean Gabriel Balan (I-TECH), Arsene Ferrus, Max Lelio Joseph (FHI), Dr. Gyrland Bois (INHSAC), Dr. Yves-Marie Bernard, Nickasky Celestin, Dr. Roland Charles, Kettia Chery, Dr. Wilner Guerrier, Dr. Claude Gilles Hyppolite, Chapelet Ivanovitch and Henaud Niclas (CDC-Haiti). The US team includes Dr. Kathleen Clanon and Joan Manuel Monserrate. ◆

HIVQUAL International Director Dr. Bruce Agins and QI Consultant Dr. Kathleen Clanon during a site visit on the initial trip to Haiti in 2007.

HIVQUAL-HAITI QI PROJECTS: Adherence Assessment

At **Hôpital de l'Universite d'Etat d'Haïti (HUEH)**, the quality committee decided to focus on adherence assessment for their QI project. At baseline, the rate of adherence assessment at the facility was only 52.8%, despite the availability of an ARV adherence assessment tool developed and disseminated by the MSPP.

First, an analysis of the tool was conducted to ensure that there were no problems with the tool itself that prevented its usage. After testing the tool with 3 providers over 2 days, it was determined that providers were highly satisfied with the form and that the problem lay in encouraging providers to consistently use it. The quality committee then implemented a number of interventions to promote its usage. First, responsibilities for using the tool with patients were expanded beyond physicians to also include pharmacists, social workers and psychologists.

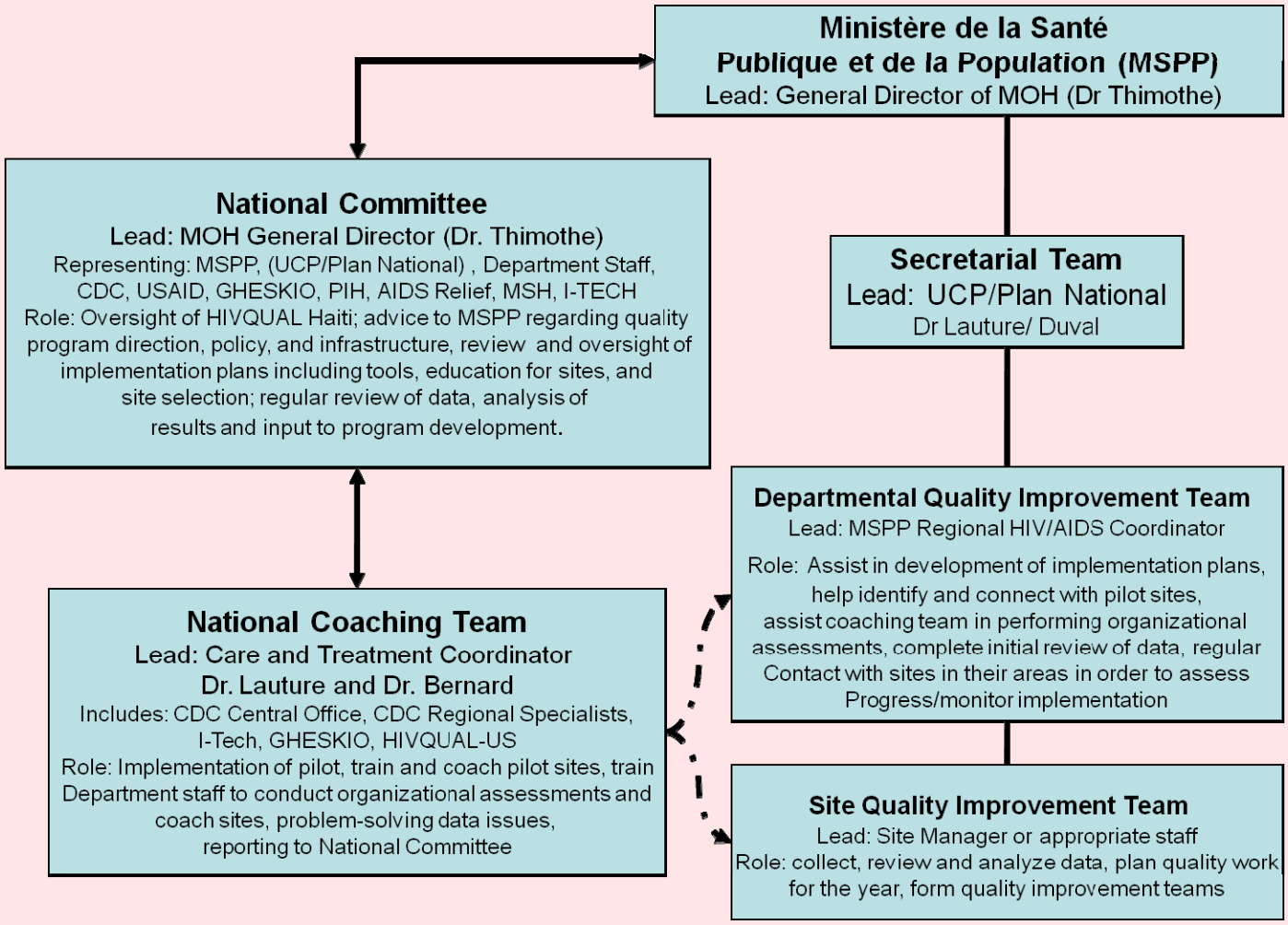
In addition, weekly sessions were held with staff and posters were displayed in the clinic to remind personnel of the importance of using the tool to assess patient adherence. Reports were given on a monthly basis to facility staff on the progression of their improvement. Any providers with low completion rates were given extra attention to help solve problems or address barriers they were facing. After three months of hard work by the facility staff and quality committee, the completion rate for the adherence assessment tool is now above 95%. After using the tool consistently, the team has discovered that more than half of the patients are <90% adherent, which puts them at risk for treatment failure. As Dr. Nathaelf Hypolitte of HUEH reports, "we couldn't have known that because we weren't doing the assessment. Now we are deciding what next steps to take for those patients."

A fishbone diagram prepared by the HUEH QI Committee

At another site, the **Hôpital St-Antoine in Jérémie**, the multidisciplinary QI committee also chose to tackle adherence assessment. Baseline data collection showed that the rate of adherence assessment was zero at the facility. An adherence sub-committee was promptly formed, which met to determine why patients were not receiving an adherence assessment. It was ultimately agreed that responsibility for assessing patient adherence should lie with the pharmacy and outpatient unit personnel, and so the team ensured that both units were well-supplied with adherence evaluation forms.

The QI committee and the adherence sub-committee met every two weeks to monitor progress; data were collected monthly. Over three months the rates of adherence assessment at the facility rose sharply, with 93% of patients receiving an assessment in November, 2008.

HIVQUAL-HAITI: PROGRAM ORGANIZATION AND STRUCTURE



*HIVQUAL-Haiti is led by the **Ministry of Public Health and Population (MSPP)**. The MSPP works with the National Committee to provide overall direction to the program. The **National Committee** is comprised of various key stakeholders, with representatives of the MSPP (including those at the Departmental level), partner organizations (such as GHESKIO, PIH, AIDS Relief, MSH and I-TECH) as well as USG agencies such as CDC and USAID. The Committee advises the MSPP on program direction and implementation, and reviews data on a regular basis.*

*The National Committee also oversees the **National Coaching Team**, which is primarily responsible for training sites in HIVQUAL and general QI methods. The team also provides ongoing coaching and mentoring to clinic staff as needed. Finally, the team is also responsible for training departmental staff to become regional-level coaches, and to conduct regular organizational assessments at participating facilities. The National Coaching team reports regularly to the National Committee.*

In addition to the coaching and mentoring provided to departmental and clinic staff by the National Coaching Team, the MSPP also provides direct oversight (via its secretarial team) to Department-level offices. Staff at the department level then provide oversight to clinic QI teams, assessing and monitoring their progress.

What makes HIVQUAL-Haiti unique is the degree to which the program was immediately integrated into the existing Departmental structure of the MSPP. The core team worked carefully to develop HIVQUAL-Haiti and its support structure within the country's HIV care delivery system. Since the initial call to create a National Committee to the appointment of the HIVQUAL-Haiti core team, the national relevance of the program has been emphasized thanks to the leadership of the Director General of the MSPP.

FACES OF HIVQUAL: Daniel Tietz — *Patient Involvement in Quality Management*

HIVQUAL International is pleased to welcome aboard Daniel Tietz as our new AIDS Program Manager for Consumer Involvement. With twelve years of experience as a consumer (patient) advocate in the New York State Department of Health's AIDS Institute, Mr. Tietz has worked to develop, implement, manage and evaluate policies and programs for PLWHAs in New York State. In 2002, he played an instrumental role in developing the Quality of Care Consumer Advisory Committee, creating a venue for patients in New York State to voice their concerns and play an active role in their quality of care.

In 1996, Mr. Tietz disclosed his HIV status to his colleagues during a statewide conference, sending a message that people who work in government are also infected with HIV/AIDS. As a respected public administrator and a consumer of HIV/AIDS services, Mr. Tietz has since been able to bridge the gap between government and patients, promoting an active role for PLWHAs in government policies and programs. In addition to creating the NYS Quality of Care Consumer Advisory Committee, Mr. Tietz also spearheaded the development of a Leadership Training Institute for PLWHAs in New York. The LTI provides leadership development, training, skills building, motivation and education to PLWHAs in the areas of government funding and community planning, HIV healthcare education, empowerment and advocacy.

Finally, Mr. Tietz serves as the AIDS Institute representative to the NYS DOH Office of Health Information Technology Transformation which is responsible for the development of polices and systems to implement electronic health information exchange and electronic health records. He also co-facilitates the National Quality Center's Consumer Advisory Committee.

In his new role with HIVQUAL International, Mr. Tietz will provide technical assistance and consultation to Ministries of Health on strategies for the development of local, regional and national patient involvement programs. He will provide regular support and guidance to HIVQUAL International staff in order to integrate patient involvement into national work plans and frameworks for quality improvement.

HIVQUAL-HAITI QI SPOTLIGHT: *Tuberculosis Assessment at Hôpital St Michel de Jacmel*

The Hôpital St Michel is located in Jacmel, a picturesque port city in the Sud-Est province of Haiti. Both ART and HIV care are provided to more than 1,000 patients with HIV/AIDS. After reviewing the first round of HIVQUAL data, the motivated and multidisciplinary Quality Committee decided to tackle three key areas of improvement: PMTCT, adherence assessment and tuberculosis assessment. TB assessment was addressed first, and a special team was assembled to improve PPD rates by 30% within three months. The team is comprised of a physician, a nurse, two social workers, local community workers, and was led by Nurse Jeannina Jean François (Nurse François is now working at the regional level for the Sud-Est Department of Health).

Results from the first round of data revealed that only 2.1% of patients during the 6-month review period had received a PPD. It was determined that the main barriers to patients receiving a PPD were their failure to return for a reading of the test, as well as their understanding of the importance of the test. Staff also needed additional encouragement to regularly place PPDs.

Once the causes for the low rate of TB assessment were determined, a number of interventions were planned, and improvement activities were launched in October, 2008. First, staff were encouraged to reinforce counseling about the importance of PPD testing at every point of contact with patients. Community workers were also directed to meet with patients to increase awareness of the PPD test. Social workers were also provided with travel vouchers to give to patients who return for a reading of their PPD. Documentation has been enhanced, with PPDs now mentioned on patients' return appointment cards.

Additionally, when PPDs are placed, providers develop a plan with the patient to have the test read in 48 hours, particularly with patients from remote areas. Patients are referred to a transit house for the two-day stay if they desire. Finally, funds were procured for the follow-up chest X-rays that are to be given to patients with positive PPDs, and for a small thermos to transport and protect the PPD tests throughout the day.

The nursing team recorded PPD results daily throughout the project, and reported monthly to the Quality Committee. By November, 2008, the rate of PPD testing had risen to 25%, a significant improvement in just over one month. Most importantly,

the facility's participation in HIVQUAL has "[given] us an opportunity to take a step back and really get a sense of the sort of work we are doing. I can tell you that it's the first time we've embarked upon this kind of work as a team," reports former TB team leader Nurse François.

With improvements in TB assessment underway, the Quality Committee is currently beginning projects to also improve adherence assessment and PMTCT; the success of the TB team has provided ample motivation to the teams assembled to tackle the other indicators. Next up, future projects are being planned to also address rates of CD4 monitoring and ARV treatment for eligible patients. ◆

HIVQUAL INTERNATIONAL NEWS BRIEFS

HIVQUAL-Mozambique

Having completed their second round of data collection, the HIVQUAL-Mozambique team is currently preparing the results for reporting back to participating facilities and other key stakeholders. In addition, regional QI groups have been established to foster collaboration, the sharing of best practices between facilities, and an opportunity to work with the local DPS (Direcção Provincial da Saúde, or provincial health directorate).

HIVQUAL-Uganda

The HIVQUAL-Uganda team has now completed their third round of data collection at the original 20 pilot sites. Having spread to additional pediatric sites last year, the second round of data collection at the expansion sites is currently underway. The team also presented a poster at the recent ICASA conference, held in Senegal in December. Prosper Behumbiize of the HIVQUAL-Uganda team gave the oral presentation at ICASA, providing an overview of the program, its expansion, as well as the data collected and QI projects implemented thus far.

HIVQUAL-Nigeria

With the first round of data collection completed, HIVQUAL-Nigeria also presented their work at the 2008 ICASA meeting in December. At the poster seminar, Dr. Ahmad Aliyu of CDC-Nigeria presented an overview of the program's accomplishments, data, and plans for future work including ongoing QI activities and expansion to additional sites.

HIVQUAL-Namibia

With two rounds of data collection behind them, the team is currently working on developing the next version of the HIVQUAL-Namibia software. Regional meetings have also been held to bring participating sites together to present their QI projects and facilitate peer learning.

HIVQUAL-Kenya

Engaged in 2008, HIVQUAL-Kenya is moving forward with plans for a key stakeholders meeting in March to establish guidelines for the program and to choose sites for the first round of data collection . In addition, a Senior Leader meeting will also be held with the MOPHS to establish a shared vision and plan for the program's launch.

HEALTQUAL-Guyana

HIVQUAL-Guyana is breaking new ground, using the HIVQUAL approach to go beyond HIV care to strengthen and improve well-child care in addition to HIV care for children and adults. Two separate samples are being reviewed in each clinic, one for well-child care and another for HIV care.

HIVQUAL-T

The second annual National HIVQUAL-T Forum was held in November, 2008. More than 700 number of participants attended, including staff from the Office of Disease Prevention and Control, the Provincial Health Office and the National Health Security Office, HIV care and treatment providers, as well as visitors from Papua New Guinea and China.◆

HIVQUAL-US UPDATE: Data Report for 2007 Released in January

The 2007 HIVQUAL-US Performance Data Report was released last month, containing data from 168 participating facilities. Data were collected on 7 different performance areas, with additional pilot indicators added this year for health literacy screening and baseline resistance testing.

Strong performance rates were seen in ART, CD4 and continuity of care indicators, with 91% of eligible patients receiving ART, 89% receiving a CD4 count every 6 months (63% every 4 months) and 83% having a clinical visit every 4 months.

Notable areas for improvement include: gynecological care (71% of female patients received a pelvic exam, 69% received a pelvic exam and a Pap smear); TB testing (70% of patients received a TB test during the past 24 months); and mental health screening (fewer than 40% of patients received a full mental health screen). 80% of patients, however, discussed substance use with their provider, and 73% were screened for depression specifically. 41% of patients were screened for post-traumatic stress disorder (PTSD).

Improvement is also needed in adherence assessment, with 47% of patients on ART recieving an assessment in all trimesters.

Performance rates for the new pilot indicators chosen by the National Advisory Committee also highlighted the need for improvement in these areas: fewer than 30% of patients were screened for health literacy, and 44% of ARV-naïve patients initiated on ART (with viral load > 1000) received a baseline resistance test. ◆

CORRECTION: In the November, 2008 issue of the *HIVQUAL International Update*, we failed to mention the key contributions made by ICAP-Nigeria staff in improvements accomplished at General Hospital Kafanchan in Kaduna state. In the photograph included on page 3 of the *Update*, several ICAP-Nigeria staff members are shown, in addition to personnel from the facility. ICAP-Nigeria, a PEPFAR implementing partner, provides clinical mentoring and other inputs at GH Kafanchan, in addition to supporting other sites throughout Kaduna and Nigeria.

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The HIVQUAL International Update

SPECIAL ISSUE: Cotrimoxazole Preventive Therapy

Spring 2009 *Volume II, Issue S1*

INTRODUCTION: Cotrimoxazole Preventive Therapy for Patients Living with HIV/AIDS

Cotrimoxazole is used primarily to prevent *Pneumocystis jirovecii* pneumonia (PCP). Globally, PCP is the leading cause of death in infants with HIV, and is responsible for a significant portion of morbidity and mortality due to respiratory illness in HIV-infected adults and children throughout the developing world. In addition to being highly effective as PCP prophylaxis, there is evidence that cotrimoxazole (CTX) also reduces the risk of bacterial pneumonias, bloodstream infections and some causes of diarrhea. Cotrimoxazole also exhibits antimalarial activity and has been shown to be effective against toxoplasmosis.

The provision of CTX preventive therapy (CPT) is perhaps the most cost effective, logistically feasible intervention to reduce morbidity and mortality in patients with HIV. Reductions of more than 40% in morbidity and mortality among HIV-positive patients receiving CPT have been reported. Patients on CPT have also been found to have a decreased rate of decline in CD4 counts and increase in viral load, as compared to the period prior to their initiation of CPT. For this reason, CPT has been chosen as a key indicator of quality care by countries supported through PEPFAR and UNICEF that are adopting the HIVQUAL framework for quality improvement.

Patient education can be an important tool for improving rates of cotrimoxazole preventive therapy. Education can take place during the consultation or in group sessions in the clinic's waiting area.

PEDIATRICS: The importance of cotrimoxazole preventive therapy in infants and children

In 2007, 370,000 children were newly infected with HIV and 270,000 died of AIDS. Most of these children were infected through perinatal transmission: *in utero*, during delivery, or through breastfeeding. Approximately half of these infants will die before their second birthday, and many such deaths could have been prevented through the provision of cotrimoxazole.

Scale-up of CPT remains an imperative: according to data from the United Nations, only approximately 4% of all HIV-exposed children in need of CPT were initiated on CPT prior to two months of age. Because confirmation of HIV diagnosis in infants with HIV is often challenging in resource-limited settings, WHO guidelines recommend initiating cotrimoxazole prophylaxis in all exposed infants aged 4-6 weeks in order to reduce mortality associated with HIV. CPT should be discontinued only once the presence or risk of HIV is excluded.

UNICEF has promoted CPT among exposed and infected infants, according to WHO guidelines, as an essential part of providing pediatric HIV treatment and care. It is essential that prophylaxis begin as early as possible to reduce the burden of high mortality seen among infants with HIV, even among exposed infants whose infection cannot be quickly confirmed. CPT has been demonstrated to be beneficial for children and infants of all ages and CD4 counts.

HIVQUAL-Uganda and HIVQUAL-Haiti have both developed pediatric indicators to measure CPT in HIV-infected children and exposed infants whose HIV status has not yet been determined. In Guyana, a similar indicator has been developed as part of the HEALTHQUAL program. *For more information on HIVQUAL and HEALTHQUAL pediatric CPT indicators, please see the table on page 2.*

FROM THE FIELD:

Simple Improvements for CTX Preventive Therapy:

- Training and encouragement of providers to determine patient eligibility and prescribe CPT
- Regular staff meetings to monitor performance and encourage staff
- Enhanced availability of CTX beyond pharmacies
  - Nurse's consultation rooms
- Improved tracking of laboratory results for CD4 monitoring
- Improved clinic record-keeping and documentation
- CTX refills provided free of charge at the pharmacy, where possible
- Adding CTX provision to childhood immunization clinic days in order to improve coverage among pediatric patients (one-stop shop model)
- Patient education
  - During consultation
  - In waiting areas
  - Discuss importance of CPT for infants and children with mothers
- Incentive schemes to promote patient adherence

UNICEF recommends the use of child health cards containing information on PMTCT services to optimize identification of HIV-exposed infants

HIVQUAL International & HEALTHQUAL: CPT Indicators	
Country	**Definition**
Uganda *Adult*	The proportion of HIV-infected patients who have been prescribed cotrimoxazole/dapsone during the 6 month review period and are still receiving it at the end of the review period or at the time of death. (All HIV-infected patients are eligible)
Mozambique *Adult*	The proportion of eligible (all HIV+, asymptomatic with CD4<350, WHO III or IV) HIV-infected patients receiving CPT during the 6 month review period.
Namibia *Adult*	The proportion eligible of patients who have been prescribed CP during the past 6 months and are still receiving it at the end of the review period or at the time of death or transfer out (CPT is recommended for all HIV-infected patients with CD4<300).
Nigeria *Adult*	The proportion of eligible patients who have been prescribed cotrimoxazole during the past 6 months (CPT is recommended for all HIV-infected patients with CD4<350).
Haiti *Adult*	The proportion of eligible patients (>10 years) having received CPT during the past 6 months (all HIV-infected adults and adolescents are eligible for CTX).
Guyana *Adult & Pediatric*	The proportion of HIV-infected patients receiving CPT during the six month review period. *[HEALTHQUAL]*
Guyana *Pediatric*	The proportion of HIV-exposed infants starting CPTby two months of age. [*HEALTHQUAL*]
Uganda *Pediatric*	The proportion of HIV-infected or exposed children (0 to <15 years) receiving CPT* during the last 3 months.
Haiti *Pediatric*	The proportion of eligible children exposed or infected with HIV (who are receiving follow-up at the clinic) that have received CPT during the past 6 months**

Performance Measurement for CPT

The ability to measure rates of CPT administration is often hampered by the absence of indicators in major public health initiatives. Cotrimoxazole procurement and dispensation measures can serve as an indirect measure of its use; however since cotrimoxazole is used for the treatment of various infections in addition to prophylaxis in HIV-infected patients, such measures will overestimate CTX usage that is specifically for prophylaxis. In addition, as some countries begin to rapidly improve supplies of CTX for HIV-infected patients, measured rates can become quickly outdated.

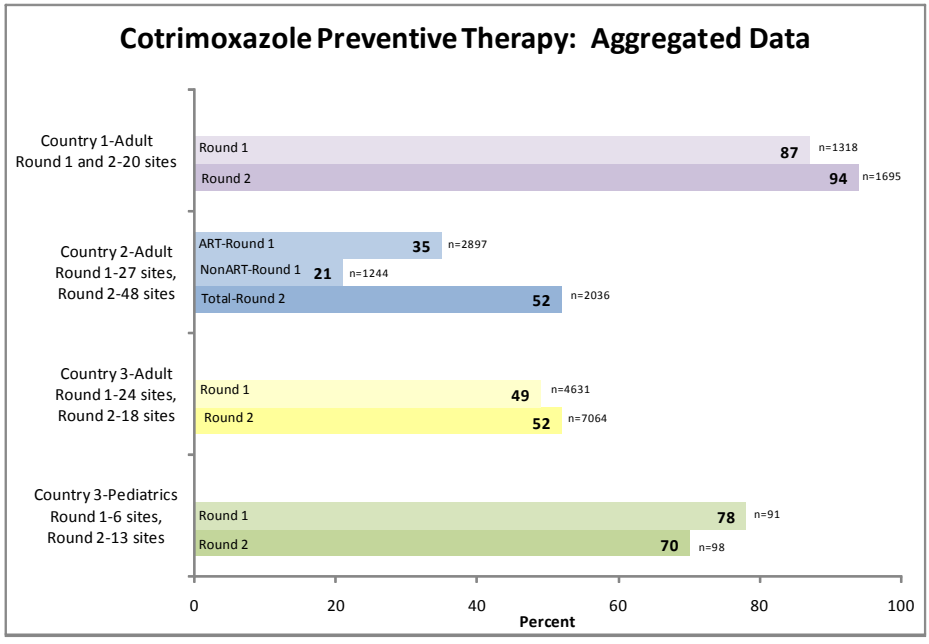
More accurate measures, beyond procurement and dispensation, reflect appropriate usage according to national and/or WHO guidelines; among patients eligible for CPT, what proportion are receiving it?

In many countries, overall rates of cotrimoxazole administration appear to be low; a 2006 assessment of pediatric cotrimoxazole prophylaxis in the *Lancet* estimated that only 4% of HIV-infected children worldwide were benefiting from this therapy. Although some countries have achieved high rates of coverage among persons with identified HIV, overall rates of cotrimoxazole administration remain low because so many people are unaware of their HIV infection.

Due to the importance of administering cotrimoxazole prophylaxis, particularly in resource-limited settings, all countries implementing HIVQUAL have developed indicators to measure performance in CPT administration among HIV-infected patients. For more information on HIVQUAL and HEALTHQUAL CPT indicators, please see the table at left.

*CPT is indicated for all children with HIV including infants born to HIV-infected mothers irrespective of ARV use during pregnancy and labor until HIV infection is excluded.

**CPT is recommended for HIV-exposed and infected children age 6 weeks to 12 months (unless HIV infection is ruled out in exposed children aged <12 months); HIV-infected children aged 1 to 4 years with WHO stage II, III or IV disease; and HIV-infected children age >5 years regardless of WHO state.



HIVQUAL/HEALTHQUAL

CPT Performance Measurement Data

All 6 countries currently implementing HIVQUAL have included indicators for CPT, defined according to national guidelines.

At left are blinded, national-level rates of CPT from 3 countries implementing HIVQUAL. Also included are national-level pediatric data for CPT prophylaxis among exposed and infected infants and children. All rates are population means.

Due to the constant expansion of HIVQUAL sites, longitudinal comparisons are often not applicable at the national aggregate level. However, improvements were seen in CPT in most cases over time. In cases where improvements were not seen, QI projects had not yet been implemented for CPT.

QI Spotlight: *CPT at Otijwarongo, Namibia*

Otjiwarongo State Hospital is located in the Otjozondjupa region of northern Namibia, and currently cares for 3,005 patients with HIV, 1,631 of whom are receiving ART.

In June, 2007, the staff at Otjiwarongo discovered in the first round of data collection that their CPT rate was 29% during the review period. The team decided to focus on OT as their QI project, aiming for 100% coverage among eligible patients.

A multi-disciplinary project team was assembled, including staff members from various stations of service provision, including the pediatric and adult wards, the nursing staff, and the pharmacy.

To improve their rate of CPT provision, the team first moved to ensure the proper capturing of data and improvements in their clinical record-keeping to document that services were being provided. Staff were regularly encouraged to fill out all forms as completely as possible.

Since Government of Namibia guidelines recommend CPT for all patients with CD4 counts less than 300, accurate and timely monitoring of CD4 counts are essential for determining eligibility for prophylaxis. The team worked to improve the tracing of patient's lab results, so that eligibility could be determined in a more timely manner.

In addition, an agreement was made with the pharmacy to make CPT available in the nurse-counselor's rooms, improving access to the drug, and streamlining provision. Pharmacists were also charged with ensuring that CTX was available at the PMTCT clinic, and to pay particular attention to the provision of CPT for infant patients. They were also instructed to ensure that CTX refills were provided to patients free of charge.

Staff from Otjiwarongo State Hospital participate in a HIVQUAL training in December, 2007.

Patients were also educated about the importance of CPT so as to empower them and promote adherence to the regimen. Education was provided in multiple settings throughout the facility: the waiting area, nurse's rooms and doctor's exam rooms.

Despite challenges such as staff shortages and losing patients to follow up, the clinic improved dramatically: by the second round of data collection in 2008, the clinic had achieved their goal of 100% PCP prophylaxis for eligible patients during the six-month review period. The clinic team is now looking ahead towards the challenge of sustaining the improvements in CPT, as well as turning their attention to implementing improvements in other areas, such as prevention education, IPT, food security and alcohol screening.

THE EVIDENCE BASE: *CPT in Low-Resource Settings*

A number of studies have demonstrated reductions in morbidity and mortality with provision of CPT for HIV-infected patients in resource limited settings. Two randomized controlled trials conducted in Côte d'Ivoire, published in 1999, demonstrated the benefits of cotrimoxazole prophylaxis for people living with HIV/AIDS in resource-limited settings. The first trial showed reduced all-cause morbidity among patients in the early stages of HIV infection who were receiving CPT. The second demonstrated reduced all-cause morbidity and mortality amongst patients co-infected with HIV and TB.

Additional studies in South Africa and Uganda, as well as the CHAPS pediatric study in Zambia have shown the effectiveness of CPT even in settings with high rates of cotrimoxazole resistance. Benefits are also seen in preventing opportunistic infections in patients with both low and high CD4 counts. In addition, annual drug costs for one year of cotrimoxazole are estimated to be less than US$10, making it a highly cost-effective intervention for resource-limited settings.

In Uganda, cotrimoxazole prophylaxis has been included in a low-cost, "basic care and prevention package" consisting of CPT, insecticide-treated bed nets, household water treatment and storage materials, condoms, and VCT information for family members of people living with HIV/AIDS. The package is an important intervention for both individuals not eligible for ART, or for settings in which ART roll-out is difficult due to access and/or limited resources and infrastructure. *For more information, please see the* Further Reading *box on page 4.*

COTRIMOXAZOLE

Cotrimoxazole is a widely-used antibacterial drug comprised of a combination of trimethoprim (a dihydrofolate reductase inhibitor) and sulfamethoxazole (a sulfonamide antibiotic). In addition to its antibacterial properties, it is also effective against some protozoan and fungal infections (see below).

Cotrimoxazole is used throughout the globe, in generic preparations and under the brand names Bactrim (Roche) and Septra (GlaxoSmithKline). It is usually available in single strength tablets (400mg SMX/80mg TMP), double strength tablets (800mg SMX/160mg TMP) and a pediatric dosage (100mg SMX/20mg TMP) as well as a liquid suspension.

Trimethoprim and sulfamethoxazole each inhibit separate steps the folate synthesis pathway, hindering the pathogen's ability to synthesize the nucleosides uradine and thymadine. This prevents the pathogen from undergoing DNA replication and transcription, halting its ability to reproduce in the host.

Cotrimoxazole exhibits an effect against a wide spectrum of pathogens, including bacterial causes of pneumonia (such as *Pneumococcus* and *Nocardia*), diarrhea (such as *Salmonella* and *Isospora*) and urinary tract infections (such as *Staphylcoccus*) as well as protozoan parasites such as *Toxoplasma gondii* and *Plasmodium falciparum*. In immunocompromised patients, cotrimoxazole is also used to prevent and treat the fungal pathogen *Pneumocystis jirovecii*, which causes PCP.

QI IN BRIEF: HIVQUAL-Mozambique

CPT provision at Hospital Central de Nampula, Mozambique

At the Hospital Central de Nampula in northern Mozambique, the facility team decided to improve their rates of CTX prophylaxis after examining their performance in the first round of data collection. Of eligible ART patients, 29% were receiving CTX prophylaxis, however only 16% of non-ART patients were receiving CTX. This important distinction was captured because of the Ministry's insistence upfront on ensuring adequate samples from both groups.

To improve performance, the team held monthly meetings with staff to discuss which patients were eligible to receive CTX. Staff were also encouraged to routinely screen patients for eligibility, and to document relevant results and treatment in patient's charts. Despite personnel shortages and high workloads, significant improvements are being seen at the site.

The Hospital Central de Nampula receives essential support from PEPFAR partner ICAP-Columbia.

Cotrimoxazole Preventive Therapy: *Further Reading*

World Health Organization. "Guidelines on co-trimoxazole prophylaxis for HIV-related infections among children, adolescents and adults" 2006. *http://www.who.int/hiv/pub/guidelines/ctx/en/index.html.*

Chintu C, et al. *Cotrimoxazole as prophlyaxis against opportunistic infections in HIV-infected Zambian children (CHAP): a double-blind randomised placebo-controlled trial.* Lancet, 2004;364:1865-71.

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Mermin J, et al. *Developing an evidence-based preventive care package for persons with HIV in Africa.* Trop Med Int Health, 2005;10:961-970.

HIVQUAL International Website Launch!

HIVQUAL International will be launching its NEW website in the coming weeks. *Check your inbox for the upcoming launch announcement! The new site will contain essential information on HIVQUAL, QI Resources, and the countries currently implementing HIVQUAL International.*

VISIT US @ www.hivqual.org/international

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WHO Recommendations for CPT

In settings with a high prevalence of HIV and limited health infrastructure, WHO suggests a **universal option** for provision of CPT to all persons with HIV, as well as infants exposed to HIV. This includes children, adolescents, adults and pregnant women.

At a minimum, eligibility for prophylaxis can be based on WHO clinical staging criteria, in which case WHO recommends that **adults** with stage 2, 3 or 4 HIV disease receive CPT. Where CD4 monitoring is available, individuals with <350 CD4 counts should receive CPT. A more stringent threshold of 200 cells/mm^3 can be used in settings where prophylaxis is primarily used only for PCP and toxoplasmosis prevention.

For **infants**, WHO recommends CPT for all exposed and infected patients under one year of age. For **children** between the ages of 1 and 4 years, WHO recommends CPT at minimum for patients with stage 2, 3 or 4 HIV disease (regardless of CD4 percentage) or for children with a CD4 percentage of <25%. Adult recommendations are to be followed for children 5 years of age and older.

PATIENT CATEGORY	GUIDELINE	
Exposed infants & children	Universally indicated, beginning at 4-6 weeks.	
Infants < 1 year	Universally indicated.	
Children 1-4 years	**UNIVERSAL OPTION** *Countries may choose to adopt universal CPT for everyone living with HIV. This strategy may be considered in settings with high prevalence of HIV, high infant mortality due to infectious diseases and limited health infrastructure.*	WHO stages 2, 3 or 4 *or* CD4 < 25%
Children >5 years Adults Pregnant women		*CD4 unavailable:* WHO stages 2, 3 or 4.
		CD4 available: CD4 < 350 cells/mm^3 *or* WHO stage 3 or 4, irrespective of CD4 count.

Source: "Guidelines on Co-trimoxazole prophlyaxis for HIV-related infections among children, adolescents and adults." World Health Organization. http://www.who.int/hiv/pub/guidelines/ctx/en/index.html

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For more information on the *HIVQUAL International Update*, please contact Marion Billings at mab24@health.state.ny.us.

The HIVQUAL International Update

SPECIAL ISSUE: QI Blossoms Throughout Namibia

June 2009 *Volume II, Issue 2*

INTRODUCTION: HIVQUAL-Namibia

HIVQUAL-Namibia is a capacity-building program, funded by PEPFAR through a cooperative agreement with HRSA, for HIV-specific quality management supported by a partnership of the Ministry of Health and Social Services (Directorate of Special Programs), the CDC Global AIDS Program-Namibia and the HIVQUAL International US-based team. **HIVQUAL-Namibia facilitates the development of sustainable quality improvement activities through building national and site-level capacity for quality management with the overarching goal of improving the quality of care provided to people living with HIV/AIDS in Namibia**. The program balances quality improvement and performance measurement while building a solid foundation of programmatic quality management. This approach emphasizes the development of systems and processes involving clinic staff and consumers with active support from agency leaders. These structural features are designed to be sustainable even when staff turnover is high or organizational affiliations change.

HIVQUAL Namibia was launched in August, 2006 at a USG-sponsored COP planning meeting with all USG agencies and partners represented. Interagency and interdepartmental collaboration was always a high priority for HIVQUAL Namibia, integrated into the very beginnings of the program. The MoHSS directs activities related to trainings, indicator

continued on page 2

FOOD SECURITY & ALCOHOL SCREENING:
Khorixas State Hospital

Improving care through new access to food assessment and support

Khorixas Hospital, located in the Kunene region of northern Namibia, currently serves approximately 579 HIV patients. Roughly half (238 adults and 17 children) of the patients are currently receiving ART. The facility has one physician, 3 nurses, a pharmacist, 5 community counselors, and one data clerk.

After the first round of data collection, the team at Khorixas set out to improve their performance on **food security screening** primarily by developing **standardized assessment tools** to encourage providers to perform this and other vital screenings. A common barrier to improved health and ARV adherence in patients with HIV, food security is an important – but often overlooked – factor to consider in patient care. The food security and alcohol screening indicators are unique to HIVQUAL-Namibia, and were developed in response to inadequate food supplies in some parts of Namibia, as well as the effects of alcohol on ARV adherence, clinical outcomes and transmission among PLWHAs in Namibia.

The MoHSS had developed guidelines on nutrition and food security screening; however no such screening tools existed for them in the

continued on page 3

Patients waiting in line for HIV Testing during a national Testing Day in May, 2009. More than 30,000 Namibians received free testing in a single day.

HIVQUAL-NAMIBIA PILOT SITES:

1. Engela
2. Katima Mulilo
3. Katutura Hospital
4. Khorixas
5. Omaruru
6. Onandjokwe
7. Outapi
8. Gobabis
9. Grootfontein
10. Keetmanshoop
11. Oshakati
12. Otjiwarongo
13. Rehoboth
14. Rundu
15. Swakopmund
16. Katutura HC

HIVQUAL-NAMIBIA INDICATORS

- Continuity of care
- HIV monitoring (CD4 and viral load monitoring)
- TB screening
- Isoniazid preventive therapy (IPT)
- PCP prophylaxis (CTX preventive therapy)
- Prevention education
- ARV therapy
- Adherence assessment
- Weight monitoring
- Food security screening
- Alcohol screening

INTRODUCTION, continued from first page

development, and expansion, and CDC Namibia provides technical assistance for data collection and analysis.

The program was initially piloted in 16 sites spread across the country representing regional hospitals, community hospitals, and health centers. The indicators used for performance measurement are shown on page 1. Currently, HIVQUAL Namibia has conducted three rounds of data collection and quality improvement interventions. The performance measurement software used by HIVQUAL Namibia was programmed by Hugh Dai, a physician and computer programmer with many years of experience working with NYSDOH AIDS Institute.

This year has brought two new areas of focus for HIVQUAL Namibia: **Regional learning networks** provide a quarterly forum for peer learning among implementing sites in the northern, southern, and capital regions. A hallmark of the HIVQUAL model is **consumer involvement in the quality improvement process**. HIVQUAL Namibia is working with the HIVQUAL International consumer involvement specialist, Dan Tietz, to engage more consumers in QI activities. In early June, two members of the NYS Young Adult Consumer Advisory Committee traveled to Namibia to participate in pre-Implementer's Meeting activities as the kick-off to the consumer involvement strategy.

Throughout its history, HIVQUAL Namibia has exemplified a collegial and collaborative spirit. As HIVQUAL Namibia is embedded in the MoHSS, with strong MoHSS leadership and strong CDC support, a culture of quality has taken hold, assuring the continued growth and sustainability of HIVQUAL Namibia as a wholly-owned national quality management program.

HIVQUAL-NAMIBIA REGIONAL QI GROUPS

The HIVQUAL-Namibia team has established three regional QI groups that meet quarterly to provide a forum for ongoing discussion of national and local quality improvement priorities. At each meeting, national and regional HIVQUAL data are reviewed and discussed with MoHSS leadership available to provide support and encouragement to participating sites. **Benchmarking** comparisons are presented by the actual team and high performing facilities identified. Teams share their strategies with each other and convey issues of concern to the MoHSS representatives. Valuable interactions lead to both clinical and national action sto improve HIV care and service delivery.

In addition to sharing data, participants also present, review and discuss their QI projects, providing an additional opportunity for peer support and learning. **Best practices** are identified through the review of these local improvement interventions. Finally, the meetings present an opportunity for the HIVQUAL-Namibia and the HIVQUAL International teams to provide **technical assistance** in QI methodology to meeting participants.

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HIV MONITORING: Onandjokwe Hospital

Improvements in HIV monitoring through improved organizational procedures and tracking

Onandjokwe Hospital, located in the Oshikoto region of northern Namibia, currently serves more than 10,000 HIV patients. 7,474 of these are currently receiving ART, including over 1,200 children. The facility has 4 physicians, 12 nurses, one pharmacist, 4 data clerks and 11 counselors.

After the first round of data collection, the staff at Onandjokwe noted that 68% of their patients had received a CD4 count or viral load in the past 6 months. Determined to improve their performance, the team set out to first identify barriers to timely HIV monitoring.

Several types of barriers were identified. In some cases, patients would miss their follow-up appointments, leading to overdue blood work. In other cases, patients would send relatives or treatment support workers to pick up drug refills, not realizing that blood work also needed to be taken on that date. Finally, some patients were simply reluctant to go for blood work at all.

Staff also encountered their own barriers, such as forgetting to enter lab results in patient care booklets and health passports. Staff shortages and network/power failures led to delays in receiving and entering results on the computer.

In order to increase the number of patients receiving timely HIV monitoring, a number of changes were implemented. First, staff were encour-

In May, 2009, the Republic of Namibia MoHSS invited two members of the New York State Department of Health AIDS Institute **Young Adult Consumer Advisory Committee** (YACAC) to visit Namibia and participate in national discussions about HIV/AIDS. The MoHSS has prioritized patient involvement in QM programs to improve both quality of care and quality of life for Namibians living with HIV. On June 3, 2009 the group met with **Madam Penehupifo Pohamba**, the First Lady of the Republic of Namibia.

From L to R: Dr. Ndapewa Hamunime (Senior Medical Officer, HIV Case Management Unit, MoHSS), Dr. Gram Mutandi (HIVQUAL-Namibia), Dorian Paat (YACAC), Dan Tietz (HIVQUAL International), Jordan Tappero (Deputy Director, CDC Global AIDS Program), Madam Penehupifo Pohamba (First Lady, Republic of Namibia), Raven Lopez (YACAC), Dr. Jeff Hanson (Country Director, CDC-Namibia), Elizabeth K. Aupindi (Executive Director, Organization for Empowerment of Widows/Widowers)

aged and reminded to request CD4 counts in a timely manner, and to enter all results in patient care booklets, health passports, and the clinic's database. In order to remind patients of when blood work is due, special cards were issued indicating the follow-up date.

Secondly, a number of organizational policies were implemented to better track and enter lab results. The computer system records all blood requests, and tracks which results are pending or received. Entries without results prompt contact with the lab via telephone to obtain the result. Results are then entered as soon as possible in the computer by lab personnel before the patient returns for their follow-up appointment.

By the second data collection, HIV monitoring at Onandjokwe had reached 95%.

The team at Onandjokwe is currently applying their QI experience to implement additional organizational changes in order to improve the provision of IPT at the facility.

KHORIXAS, continued from page 1

patient records. The team at Khorixas adapted the material from the MoHSS guidelines, inserting a screening tool into all patient booklets. In addition, the team built upon their momentum for change by doing the same for alcohol screening.

To complement these changes in documentation and screening tools, the facility developed linkages with local community-based organizations that could assist patients with nutritional support. One of the barriers to food security screening was that even if patients were correctly identified as needing support, providers often felt there was nothing that could be done to help. By developing linkages with the CBOs, a **referral system** was developed, thus further incentivizing screening and providing additional help to patients in need.

After the changes were implemented, both food security and alcohol screening rose from 0% to nearly 98% after the second round of data collection.

However the team at Khorixas did not stop with food security and alcohol screening. With increased vigilance and a new **culture of quality improvement** at the facility, the team also improved their documentation practices for TB screening and IPT provision, motivating staff to utilize the TB screening tool that was already in place in the patient record. After the third data collection, more than 90% of patients at Khorixas were being screened for TB.

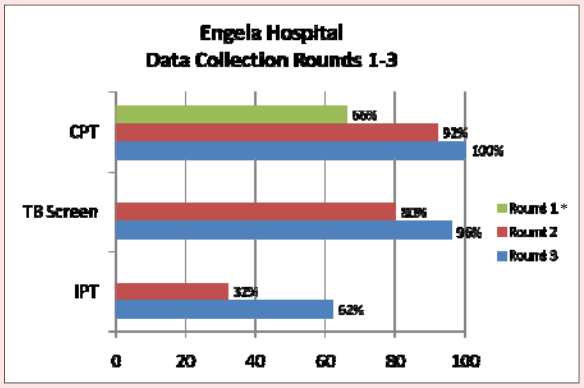
TUBERCULOSIS SCREENING, ISONIAZID AND COTRIMOXAZOLE PREVENTIVE THERAPIES: Engela State Hospital

Multifaceted improvements lead to implementation package

Engela State Hospital, located in the Ohangwena region of northern Namibia, currently serves 7801 HIV patients, 1044 of which are children. Nearly half (3385 adults and 543 children) of the patients are currently receiving ART. The facility has 4 physicians, 5 nurses, a pharmacist, pharmacy assistant, a counselor, and 2 data clerks.

After the first round of data collection, the team at Engela decided to focus on improving their rates of TB screening and isoniazid preventive therapy (IPT). Several key areas for improvement were identified: documentation and adherence monitoring at the pharmacy, patient education and awareness about IPT, and most importantly the fact that IPT was only dispensed at the TB clinic, which was not co-located with ART services.

Given these identified areas, the team took the opportunity to radically reorganize their service delivery in order to foster improvements in not only IPT and TB screening, but also the provision of CTP. The facility quickly began **dispensing IPT directly within the ART clinic.** This meant that patients no longer had to see two different doctors, visit two separate pharmacies, or be managed according to different schedules and procedures.



** Round 1 data unavailable for TB screening and IPT indicators*

To augment the changes in IPT provision, the team also implemented a number of evidence-based improvements. **Patient education** on IPT was included in morning group counseling sessions. Departmental meetings were held with clinic staff to provide feedback and monitor performance. Physicians were also urged to screen patients for TB, and to document TB status and IPT therapy in patient ART booklets.

Since the improvements were implemented, IPT rates rose from 10% to over 30% between the first and second data collections, and as of the third data collection in December, 2008, Engela is reporting over 60% of eligible patients on IPT. TB screening has also improved, with 96% of patients being screened during the review period for the third round of data collection.

Beyond improvements in performance, the team has also noticed improved **teamwork** and motivation among staff, particularly with pharmacy staff taking leadership roles in implementing the interventions.

In addition to reorganizing IPT provision, the team at Engela decided to capitalize on the momentum of organizational change in order to also implement improvements in cotrimoxazole preventive therapy (CPT).

Engela now also reports 100% coverage for PCP prophylaxis among its patients. CTX provision and screening for IPT have become part of a "basic package" provided to all patients, which not only reduces morbidity and mortality, but also serves as a stepping-stone to placing patients on ART.

Currently, the Engela team is looking ahead towards implementing improvements in prevention education through the training of "**expert patients**" to serve as peer educators, and by improvements in documentation of patient education by counselors.

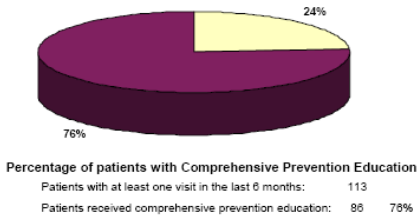
PREVENTION EDUCATION & ALCOHOL SCREENING: Omaruru State Hospital

Improvements through screening tools and staff training

Omaruru State Hospital, located in the Erongo region of western Namibia, currently serves 719 HIV patients. Roughly half (345) of the patients are currently receiving ART. The facility has one physician, 2 nurses, a pharmacy assistant, 4 counselors, and one data clerk.

After the first round of data collection, the team at Omaruru decided to first tackle prevention education, after discovering that only half of their patients were receiving proper education and counseling.

Training materials were developed for the clinic's counselors, covering basic education on HIV, modes of transmission, prevention, household precautions, reproductive choices, effects of alcohol use, and feeding options for HIV-positive mothers. In-service training was then provided to the counselors using the prepared materials, and in June 2008, group education sessions began for patients.



Prevention education performance at Omaruru from the third round of data collection

In addition, all staff were encouraged to record all education sessions performed in the patient booklets, and to take the time to educate their patients where necessary. After the third round of data collection, the prevention education rate had risen to 76%. The team is currently implementing education programs in outreach clinics, and developing improved interventions and counseling for patients who do not wish to disclose their HIV status to their partners.

After tackling prevention education, the team at Omaruru moved forward to also improve their alcohol screening rates. A screening tool was developed (see the figure below) and implemented for use in the patient records. Alcohol screening rates rose from 0% and 5% at the first and second rounds, respectively, to 73% at the third round of data collection. The team is now developing a project to improve their rates of IPT, again by improving documentation and encouraging clinicians to start all eligible patients on IPT.

ALCOHOL SCREENING QUESTIONNAIRE

1. Do you sometimes drink beer, wine or other alcohol beverages?
2. In the past 3 months, how many times in one day did you take more than: 5 drinks (men); 4 drinks (women)
3. How many days a week do you drink?
4. How many drinks do you usually take?
5. Is patient abusing alcohol? Y/N
6. Was the patient referred? Y/N; If yes, to where?

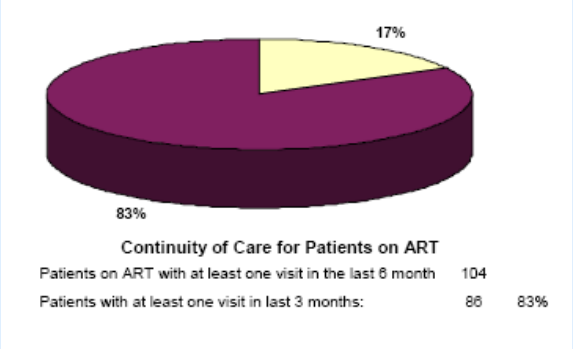
CONTINUITY OF CARE: Katutura State Hospital

Improving retention in care through patient tracking and expert patients

Katutura State Hospital, located in the Windhoek region of central Namibia, currently serves more than 11,000 HIV patients. 5,020 of these are currently receiving ART, including over 700 children. The facility has 2 physicians, 8 nurses, 4 pharmacists, 4 data clerks and 8 counselors.

As of the second round of data collection, 76% of patients on ART at Katutura hospital were recorded as having at least one clinic visit in the previous three months. In order to improve this rate, the team first met to identify the barriers to continuity of care for their patients.

The first and primary issue identified was documentation. The **new MoHSS ART cards** were not being utilized at the site, meaning that information on several HIVQUAL indicators was not being captured, including patient visits. The team then ensured that the new cards were provided and utilized in all patient records.



Continuity of care at Katutura from the third round of data collection

Second, the staff realized the need to track patients that did not appear for their appointments. A group of trained peer educators known as "**expert patients**" were utilized to help track patients lost to follow-up. These Expert Patients are trained in HIV care and the Integrated Management of Adult and Adolescent Illnesses (IMAI) through a WHO-developed module, and have close ties to the community, making them excellent liaisons for re-engaging lost patients.

At the third data collection, the facility saw additional improvement with 83% being seen.

In addition to continuity of care, the staff at Katutura have also been implementing improvements for food security and alcohol screening, adherence assessment and TB screening/ IPT provision. Improvements have included developing screening tools and forms, and engaging all staff in the importance of IPT and adherence assessment/counseling.

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HIVQUAL International is supported through the U.S. Department of Health and Human Services, Health Resources and Services Administration as the International Quality Center for PEPFAR and through funding from UNICEF.

For more information on the *HIVQUAL International Update*, please contact Joshua Bardfield at jeb16@health.state.ny.us.

HIVQUAL UPDATE
INTERNATIONAL
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1
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About this issue: *This issue of the HIVQUAL-International Update is dedicated to highlighting the best examples of quality improvement among in-country HIVQUAL partners. Impressive progress has been achieved across a variety of performance indicators, and many challenges overcome. These QI stories reinforce the concept that small changes lead to tangible improvement, and we are delighted to share the following examples.*

Namibia
Katutura Health Center
Prevention Education

Katutura Health Center, located in a suburb of the Windhoek district, is staffed by two doctors, five nurses, one pharmacist, two pharmacy technicians, one pharmacy assistant, two data clerks, four counselors, one revenue clerk, one maintenance person, and three expert patients.

Health Center staff chose prevention education as their QI focus, because of low performance demonstrated in this area.

Investigation of data revealed that patients starting treatment were not receiving required prevention education at the time of initiation because of poor scheduling. For example, one day 40 patients arrived, and on another day only five showed up.

During this analysis, staff also identified a link between poor patient adherence and prevention education deficits. Additional obstacles included perceived patient disinterest in counseling, and delays between adherence counseling and ARV initiation.

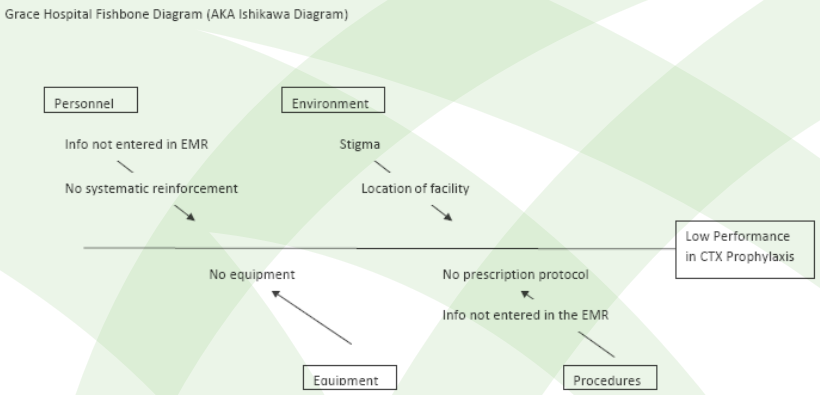
Katutura staff decided on a two phase improvement strategy. Phase I, January – June 2009, included: ensuring **consistent documentation**, such as recording in patient charts at time of counseling; **positive living counseling** for all patients regardless of eligibility (including disclosure, nutrition, substance use, condoms and family planning); patient referrals for **adherence** counseling based on eligibility; designated days for particular services; and introduction of a **patient scheduling tool** to assist counselors in general management of patient load.

To bolster adherence for all new patients beginning on HAART, a DVD was developed and produced on-site at Katutura Health Center (with technical support from students at the University of Namibia [UNAM]). The movie, "Your ARV Treatment," is screened every Friday for all patients beginning on ART treatment, during which time patients are assembled to watch the video and later engaged in a Q&A session. Created in the three chief languages of the region (English, Oshiwambo and Afrikaans), the video begins with a step-by-step introduction to Katutura's clinical services and the consultation process. The video emphasizes ART adherence, and reinforces preventive behaviors (covering disclosure,

continued on page 3

GRACE CHILDREN'S HOSPITAL:

COTRIMOXAZOLE PROPHYLAXIS HAITI



A Message from a colleague in Haiti: I'm back working with the sites with a focus on those located in the regions hit by the [earthquake]. We are conducting preliminary assessments to make sure that in addition to providing urgent care to the victims, the sites are also providing HIV/AIDS care to PLWA's. We still have the responsibility to make sure that the best care is provided to every patient every day in every clinic.

Grace Children's Hospital, founded in 1967, is located in western Haiti just outside the capital of Port-au-Prince. The hospital serves a region with a population of approximately 67,000 people, including 3500 people living with HIV. Of the HIV+ population, 1142 are currently on HAART. The hospital's HIV program is open 8:00AM until 4:00PM, Monday through Friday.

The hospital is staffed by 16 doctors, five counselors, one psychologist, one technician, 20 nurses, 13 lab techs, two data clerks, five outreach workers, one pharmacist, two adherence counselors, one nursing coordinator, and 18 auxiliary staff.

After baseline data revealed a low performance score of 32.4% in administration of CTX prophylaxis, defined as the proportion of HIV-positive adolescents who received cotrimoxazole prophylaxis in the preceding 6 months, staff determined to prioritize improvements in this area. In December 2008, Grace established a formal quality committee composed of staff from the hospital's HIV clinic.

Staff created a project team specific to CTX prophylaxis (pictured on page 3), including three doctors, one data clerk, one counselor, and one nurse.

To systematically analyze the reasons for low performance, the team decided to meet weekly. At this meeting, staff constructed a **fishbone diagram** (pictured above). Staff also committed to improving the **recording of patient information** in the electronic medical record (EMR), both for purposes of care and to more accurately measure the impact of recent strategies. Reports were submitted to the committee for regular review at weekly meetings.

Careful analysis identified four specific areas for improvement activities. In response to the absence of a prescription protocol for CTX prophylaxis, the team created and **implemented a protocol for prescription of CTX prophylaxis** and prominently posted it in the clinic. They also found that CTX was not prescribed on a regular basis, nor was it regularly captured in the EMR. To address this issue, staff directed providers to **regularly check for prescription of CTX** in patients, **complete patient records** fully at each visit, and reinforce the need to **capture CTX data in the EMR**.

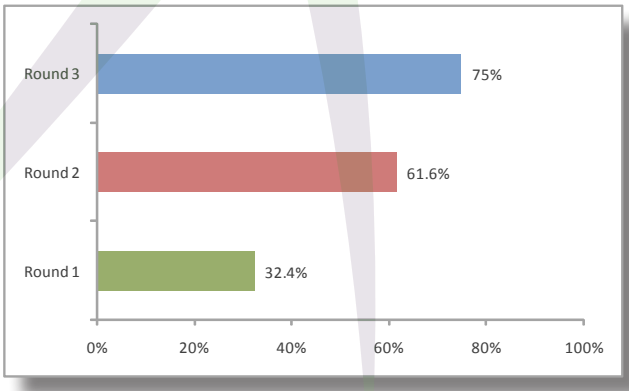
As a result of this intervention, performance in rounds two and three improved markedly, up to 61.6% and 75% respectively (pictured).

Staff at Grace Children's Hospital gained valuable insight as a result of this improvement project, such as the importance of a multidisciplinary approach to management of HIV treatment and care, and the importance of QI teams.

While confident in their current accomplishments, staff is focused on future improvement in the face of remaining obstacles.

continued on page 3

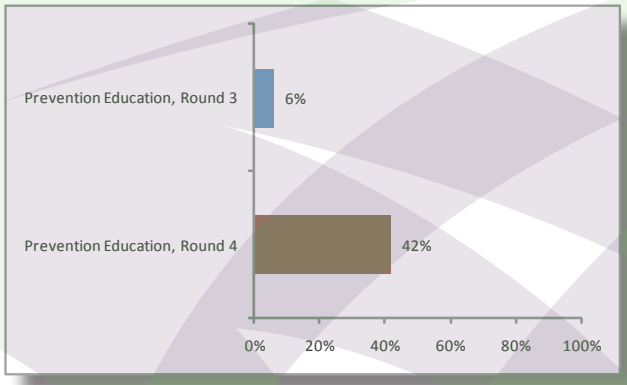
Grace Children's Hospital, % of patients receiving CTX prophylaxis (128 patients)



Source: Grace Children's Hospital, 2009

Katutura, continued from first page

Katutura Health Center, % of patients receiving prevention education



Source: Katutura Health Center, 2009

substance use, condoms and family planning).

As a result of this multi-level improvement approach, prevention education performance increased seven-fold from 6% at round 3, to 42% at round 4 data collection.

Beginning in June 2009, and running until December 2009, Katutura initiated Phase II of their strategy. During this time, staff introduced prevention education and adherence counseling sessions for patients with more than one year of ARV therapy; continued TB screening; focused on initiation and adherence with isoniazid prophylaxis (IPT); instituted counseling and screening before refills were completed to reinforce patient knowledge about drug regimens; and worked to acquire additional audio visual tools to continue multimedia educational interventions to improve patient knowledge.

Even within an ambitious and well-managed QI program, challenges lay ahead. Katutura's quality improvement activities are labor intensive (requiring multiple trained staff and regimented documentation); involve patient coordination with a focus on adherence; and confront language barriers between patients and staff.

Undaunted, Katutura staff has also initiated a QI project in response to food security and alcohol screening measures, two indicators unique to Namibia. To address these issues, staff devised a new screening tool, established routine screening to be initiated by counselors, and arranged to complete a screening tool for all patient visits.

ABOUT KATUTURA

The Health Center serves a large community with a population of approximately 90,505 people. The ARV clinic was established in November 2006, and by January of 2007 was serving nearly 40 patients per week. By October of 2009, the health center was serving between 300-580 patients daily, with 120-160 starting ARV therapy every month. In June 2007, three outreach clinics were established to better serve the rapidly growing patient population.

Grace, continued from page 2

Power failures continue to impact all aspect of care, rendering consistent entry of patient information in the EMR challenging.

Grace Children's Hospital staff made several recommendations toward improved quality of care. They plan to continue use of fishbone diagrams to better understand processes of care and stimulate systems level solutions. The team proposed to establish additional project teams, and continue weekly review meetings to emphasize documentation and regular entry of patient info in the EMR. The QI team is highly motivated and formally committed to success in their QI work, a sentiment bolstered by their ongoing plan to submit new improvement strategies to the quality committee.

*Please note: Grace Children's Hospital sustained damage during the recent earthquake, but remains operational. We will keep you updated as more information becomes available.

THE AIDS SUPPORT ORGANIZATION (TASO) MBARARA:
CD4 Monitoring

UGANDA

The AIDS Support Organization (TASO) is currently the largest non-governmental organization providing HIV/AIDS services in Uganda. The TASO Mbarara Center is an HIV clinic located ajacent to the Mbarara Hospital, Mbarara municipality of south western Uganda. The Mbarara HIV clinic was established in 1989 by eight volunteers in a one room office of the Mbarara hospital, and in 1991 became a formal and semi-autonomous TASO Center. TASO Mbarara now runs six outreach clinics covering 16 communities over seven districts. The TASO Mbarara clinic also sees patients from the neighboring countries of Congo, Rwanda, and Tanzania.

After receipt of baseline data, the quality improvement team identified low performance (17%) in CD4 monitoring, prioritized this area and developed a systematic approach to improving their performance.

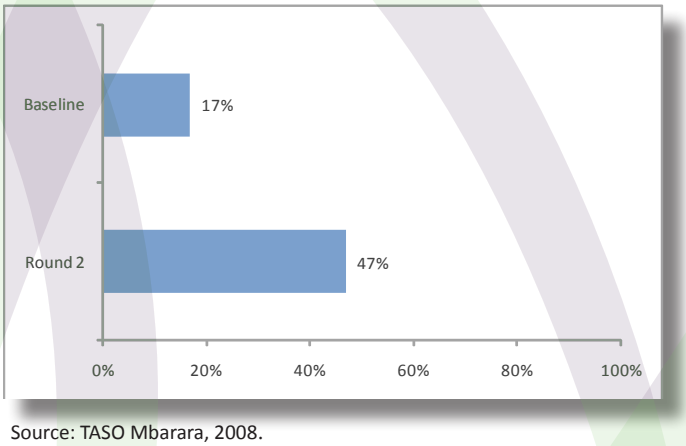
First, they analyzed methods to optimize the use of their existing scheduling system to track patients based on type of visit needed. The team then worked with hospital staff to **reinforce scheduling** of appointments **for CD4** counts, with particular emphasis on **follow-up** for patients who do not return. To encourage patients to keep appointments, staff developed **education sessions**, with **CD4 testing** available **on the spot**. As a way to ensure patient completion of all necessary screenings and tests, the QI team developed a guided and systematic process to **accompany patients** from station to station within the clinic. The team also worked with staff to strengthen **documentation of CD4 results** in all patient files. Staff was sensitized to the importance of **consistent filing** of patient forms, and an effort was made to locate and organize all loose records.

For patients lost to follow-up, the **team engaged field-workers** (community outreach staff) to help identify those patients within their communities and schedule patient appointments.

The team scheduled monthly meetings to review improvement activities.

Follow-up data demonstrated an increase in CD4 monitoring from 17% at baseline to 47% at round two.

TASO Mbarara, % of patients receiving CD4 monitoring (two rounds)



Source: TASO Mbarara, 2008.

These innovations have provided the TASO Mbarara improvement team with valuable insights. **Using community outreach** as a means to reach patients and schedule appointments has produced notable results in the area of adherence. To improve documentation, staff enlisted a volunteer filing clerk, while **reinforcing existing systems** and strategies to improve patient appointments.

These notable successes have paved the way to undertaking additional improvement activities. Missing charts, documentation issues, and a high volume of testing samples continue to challenge TASO staff. Hiring of a full time data clerk is a priority, and staff plan to engage other teams at the national level to share experiences across facilities.

HIVQUAL is supported through the U.S. Department of Health and Human Services, Health Resources and Services Administration as the International Quality Center for PEPFAR.

For more information on HEALTHQUAL or the HIVQUAL International Update, please contact Joshua Bardfield at jeb16@health.state.ny.us.

HIVQUAL.ORG HAS BEEN EXPANDED!

WWW.HIVQUAL.ORG

The HIVQUAL-I site provides current quality improvement information and updates on HIV/AIDS quality of care across all HIVQUAL International sites, and offers instructive quality improvement resources to support global HIV/AIDS quality management.

HIVQUAL.org includes a breadth of information about our organizational background, program activities, quality management framework, and invaluable resources from the New York State Department of Health Quality of Care Program, HIVQUAL-US, and the National Quality Center.

Recent additions include links to QI resources and publications, and a soon-to-be released QI projects data base. In addition, all issues of our HIVQUAL International Newsletter can be found on the site.

Nigeria

Al Nouri Specialist Hospital, Kano: CD4 Monitoring

Al Nouri Specialist Hospital, a treatment partner of AIDS Relief, is located in Kano, northern Nigeria. As of July 2009, approximately 2288 patients had received HIV care services, of which 1188 received ART.

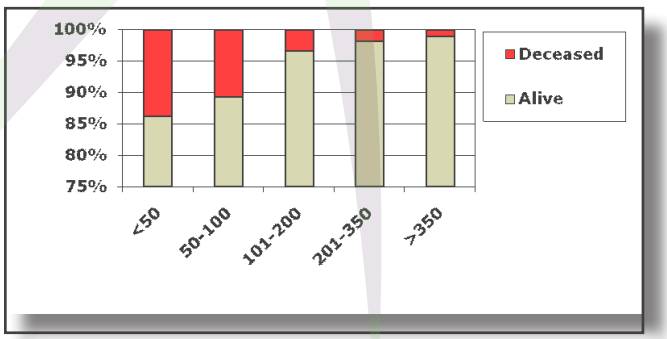
To jump start their improvement program, Al Nouri established a quality management committee comprised of five staff, including the ART physician, three nurses, and a pre-existing M&E representative. Through facility partner AIDS relief, a June 2009 quality training provided valuable educational support for a member of the QI team. Monthly meetings were established to review QI activities.

When baseline data revealed low performance in CD4 monitoring (% of patients from chart reviews with CD4 repeat at 6 months within the month), hospital staff chose that aspect of care as their QI focus. On HIV clinic days, the team used morning health discussions as a resource to implement **patient education** about HIV and stress the importance of CD4 monitoring. The team also used **weekly clinic meetings** to reinforce the importance of CD4 monitoring among physicians at the hospital. Al Nouri's improvement team asked **nurses to flag patient charts** to establish reminders for **follow-up** CD4 count. The nursing staff was also asked to request CD4 counts immediately after completion of vital signs during patient visits, and prior to meeting with a doctor. To reduce no-shows and redundancy, doctors took responsibility for coordinating clinical appointments with dates of CD4 testing. The team tasked the lab with identifying and returning all poorly filled out lab forms.

Staff now understand that goals can be achieved through small changes, and documentation of progress within short time frames promotes continuity within the quality program. The team remains focused on their improvement goals, and is prepared to shift activities if measurement demonstrates that a particular strategy is not working from one round of data to the next.

HIVQUAL software will continue to improve data reporting, supported by HIVQUAL coaching to enhance performance and success of the QI activity.

Baseline CD4 and patient survival at 9 months from initiation of HAART



Source: Al-Nouri, 2009

Faces of HIVQUAL:

Michelle Geis, HQ-I Quality Manager

Michelle Geis, MHA:

HIVQUAL Lead for Kenya

Michelle Geis, of Salt Lake City, UT, joins HQ-I as a quality manager tasked with implementation of the HIVQUAL model, and assisting in-country teams to develop sustainable implementation plans. Geis comes to HQ-I after more than a decade at HealthInsight, serving most recently as their Vice President for Quality Improvement Operations. At HealthInsight, Geis oversaw the organization's quality improvement divisions, including Medicare contracts in Utah and Nevada. She has substantial experience in quality improvement planning and implementation in a variety of clinical settings.

Michelle received her Masters in Health Administration from the University of South Carolina School of Public Health, and her Bachelor's degree in Health Policy and Administration from Pennsylvania State University.

Program Update: Pediatric HIVQUAL-T

Thailand's national quality program continues to demonstrate a significant commitment to domestic quality improvement

Launched in Thailand in 2005 at 5 pilot sites, pediatric HIVQUAL-T is currently expanding to 20 regional/provincial hospitals and 28 community hospitals.

In July 2009, to support national quality improvement activities, Thailand held its first pediatric ARV adherence promotion workshop in Bangkok. Sponsored by the Bureau of HIV, AIDS, STI and the Thailand MOPH-US CDC, the 1-day workshop (right) attracted more than one hundred doctors, pharmacists, nurses, and health officers from 17 regional and provincial hospitals, 42 community hospitals, and 12 public health offices.

With an emphasis on promoting ARV adherence strategies from different implementing sites, and engaging pharmacists in pediatric ARV adherence promotion, the workshop also included training on guidelines, techniques, and methods for pediatric ARV adherence assessment and monitoring. Break-out sessions allowed participants to examine these topics in greater detail, and share tools and activities for future implementation.

HIVQUAL-T Indicators:
- CD4 Testing
- OI Prophylaxis
- ARV Therapy
- TB Screening
- Prevention Education
- Pap Testing
- Adherence Assessment
- STI Screening

Workshop presentations were video recorded, and currently available on the HIVQUAL-T website (www.cqihiv.com). This resource is accessible to any facility in Thailand interested in learning about pediatric ARV adherence promotion techniques.

As a result of this conference and national quality improvement priorities, several hospitals have proposed innovative QI activities connected to **ARV adherence**, including:

- **Reviewing adherence indicator results in weekly HIV staff meetings**
- **Developing an adherence records form for the clinic**
- **Developing adherence measurement tools**
- **Routine analysis of outcomes of ARV adherence**
- **Attending pediatric ARV adherence training, sharing best practices, and participating in lectures and workshops on how to promote ARV adherence and how to develop adherence tools.**

The impact of this workshop will be measured by examining ARV treatment and adherence indicators in the pediatric HIVQUAL-T program for FY2009 and FY2010.

Additional Pediatric Indicators:
- Routine Vaccinations
- Growth & Development
- Dental Health
- Psychosocial Issues

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APRIL 2010
1
Vol. I, Issue 1

SPECIAL EDITION: ALL COUNTRY LEARNING NETWORK

Driven by the mission to provide a forum for peer exchange to advance knowledge and build capacity to create sustainable national quality management programs, performance measurement strategies and quality improvement techniques, the first HEALTHQUAL/HIVQUAL International All Country Learning Network took place from February 22-26, 2010 in Johannesburg, South Africa. The ACLN was attended by HQI partners and colleagues in the field of quality management, including representatives from Botswana, Guyana, Kenya, Mozambique, Nigeria, Namibia, Rwanda, Swaziland, Thailand, and Uganda. The five day Learning Network included morning plenary presentations and country panels, and afternoon Open Space sessions -- a participant-driven and interactive approach to peer learning in which attendees generate and facilitate all topics and discussion.

Performance Measurement

COUNTRY PANELS (2/23):
Swaziland*: Dr. Velephi Okello, National ART Coordinator, Swaziland Ministry of Health discussed performance measurement strategies undertaken by the country's National AIDS Program.

She described how in 2004, the Mbabane Government Hospital lacked an electronic data system, and when one was eventually introduced, it was not sustainable due to human resource limitations. A more basic paper-based system

*HQ-Swaziland receives support from UNICEF

Quality Improvement

COUNTRY PANELS (2/24):
Uganda: Julius Ssendiwala of Uganda's Ministry of Health discussed his country's decentralized QI model, designed to build health systems infrastructure at both regional and district levels.

Mr. Ssendiwala explained the district model for QI through engagement of district leadership in coaching and mentoring, and distribution of progress reports, as well as training of district health teams.

Quality Management Program

COUNTRY PANELS (2/25):
Mozambique: Dr. Mussa Calu, Project Manager for HIVQUAL Mozambique presented the MOH model for Quality Improvement in his country.

Dr. Calu described the role of provincial teams in leading regional QI activities, their participation in training health facility teams to collect and analyze data, and in building capacity of health facility teams for the

was later implemented, but again major problems occurred with system longevity. Finally in 2007, a more comprehensive EMR was installed and is now operational in 13 of 14 ART initiation public sites. HEALTHQUAL indicators are now being integrated into the national M&E system.

Haiti: In the absence of our colleagues from Haiti, Joan Manuel Monserrate discussed the integration of performance indicators into the national web-based electronic medical record (EMR), a system developed by I-Tech and the CDC between 2007-2008.

The integration of performance indicators in the EMR reduced the burden of data collection and facilitated data analysis. Since the system is web-based, it allowed for collection of patient data from sites throughout the country. *Continued on pg. 3*

The team from Uganda plans to increase QI development at the district level, integrate QI into district workplans, and continue building capacity of district health teams.

Namibia: Dr. Gram Mutandi, Medical Officer, MOH Namibia provided an informative overview of promotion of quality improvement work through regional group activities.

Dr. Mutandi described the importance of regional groups in promoting peer learning, facilitating on-going QI skills building, and providing benchmarking reports.

Dr. Mutandi screened an innovative patient adherence education DVD from Katutura Health Center to demonstrate tools that impact QI at

Continued on pg. 3

implementation of QI, among other activities.

Thursday's session also included an all-country discussion about retention interventions, an area characterized by a scarcity of current information. An upcoming newsletter will address this issue in greater detail, and include a country-by-country snapshot of current and proposed retention activities.

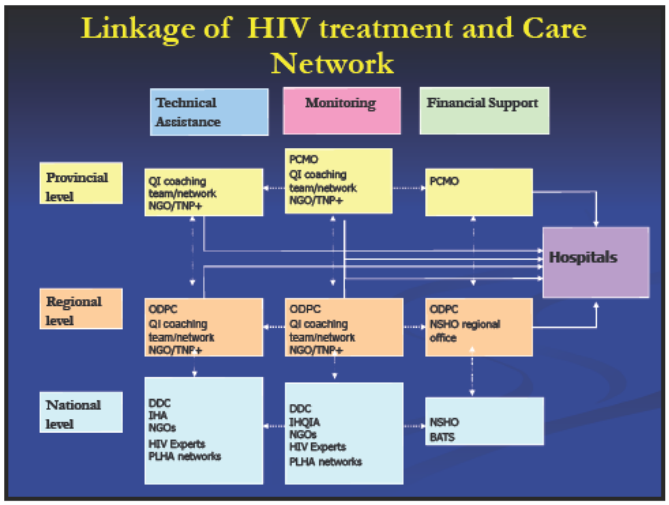
Team Mozambique: Carlos de Sousa, Dr. Calu and Antonio Barros Lourenco

Strategic Ways for HIVQUAL-T: Sustainability in Thailand

Dr. Peeramon Nigsanond, Dr. Chitlada Utaipiboon and Dr. Rangsima Lolekha representing HIVQUAL-T, presented on sustainability of QI in Thailand and a model for the scale-up of quality services.

The HIVQUAL-T team discussed Thailand's national ART program, in-country implementation of HQ, and strategies for programmatic sustainability. This presentation was particularly significant given Thailand's 7 years of HQ implementation and the many peer learning opportunities inherent in their experience.

In 2001, there were only 1710 people in Thailand on ART, and by 2008 that number had grown exponentially to reach 176,760 with a current average of 1200 new individuals on ART each month.



The audience learned about the four phase planning structure of HIVQUAL-T, comprised of: Phase 1 - Pilot (2003-2005) at 12 hospitals; Phase 2 - Scale-up and expansion (2006-2007) up to 148 hospitals; Phase 3 - National system development (2008-2009) targeted for 835 hospitals; and Phase 4 - Integration to national programs (2010-2014) targeting all government hospitals.

The Thai team went on to describe sustainability strategies, including: 1) partnerships and networking, and linkage of the HIV treatment and care network at the national, regional, provincial and hospital levels; 2) coordination among providers through regional/provincial group learning and website communication; and 3) the integration with national programs, including the National ART Program (NAP) and Institute of Hospital Accreditation (HA).

Participants learned how the HA is the main stream of quality improvement of health services in Thailand, and how HIVQUAL-T coordinates with the HA to develop common tools for QI communication. HIVQUAL-T also presented the national 5-year proposal developed and approved with financial support from the National Health Security Office (NHSO), a significant programmatic transition from CDC funding toward fiscal sustainability. Program management is run through the bureau of AIDS/STI/TB (BATS) MOPH and technical working groups with supervision by the national QI HIV treatment & care steering committee. Integration of QI is also planned in adult and pediatric treatment and care including the children ARV network (CAN) model.

Continued from pg. 2

Haiti's EMR has promoted overall sustainability in performance measurement, eased the data collection burden, and bolstered access to performance data to motivate and engage facilities in QI activities.

Kenya: John Wanyungu, HIVQUAL Kenya Coordinator discussed indicator development for Kenya's national program, with emphasis on health systems strengthening.

Although HIVQUAL Kenya is still in its initial stages, data collection at 36 HIVQUAL implementing facilities is planned for late 2010. In addition to HIVQUAL facility-level indicators, Kenya's MOH is taking a unique approach by developing health system-level indicators, including: resource availability (i.e. test kits, ARVs, CTX and PEP guidelines); health worker safety, patient involvement; application of the National Quality Management Standards (KQM); and staff satisfaction assessment.

Continued from pg. 2

the local level and engage patients directly in coordination and continuity of care.

Nigeria: Dr. Ahmad Aliyu of Nigeria provided an informative country presentation focused on an in-depth study of patient retention.

Dr. Aliyu covered contact tracking; retention tools, such as patient tracking and patient registers; improving lost to follow-up using fishbone diagrams; monthly meetings and standard protocols; and proposed next steps, including decentralization of ART services, strengthening of adherence counseling, improving documentation, and consumer involvement.

Dr. Velephi Okello, MOH Swaziland

Julius Ssendiwala, MOH Uganda

HEALTHQUAL Guyana: Integrating Quality Management into the National Health Infrastructure

Nicholas Persaud (pictured), National HIV Care and Treatment Coordinator and Dr. Jadunauth Raghunauth (pictured), Director, National Care and Treatment Center represented Guyana's Ministry of Health at the ACLN. Mr. Persaud provided an informative presentation on HEALTHQUAL Guyana and the integration of quality management into the national health infrastructure.

Nicholas Persaud & Dr. Jadunauth Raghunauth

Mr. Persaud described the National Health Sector Strategy goals for development, and how the HIVQUAL model was applied (in collaboration with the MOH, CDC, and UNICEF), and later expanded to impact system-wide improvements in quality of care - leading to the adoption of HEALTHQUAL across Guyana's national health system. This presentation was particularly well received given substantial interest among several countries in programmatic expansion to address a broader public health approach to quality management.

Persaud also described the integration of HIV and well-child care, including shared access to medical records, standardization of QI methodology, and the provision of PMTCT services at many well-child sites. Regional implementation is guided by regional MCH supervisors, facilitating coaching and support for clinical sites, and enhanced expansion and integration of the QI model moving forward.

Challenges to coordination of HIV and well-child care, availability of patient records, human resource gaps, and staff attrition, are tempered by the many lessons learned. Recruitment of an MCH HEALTHQUAL Officer to aid coordination, training of regional supervisors, regular meetings and training for peer learning, and regional integration and participation to support sustainability were essential ingredients to develop a sustainable program.

Expansion is currently underway to additional MCH and ART facilities with advocacy and support from regional authority and support from MOH.

What is Open Space?

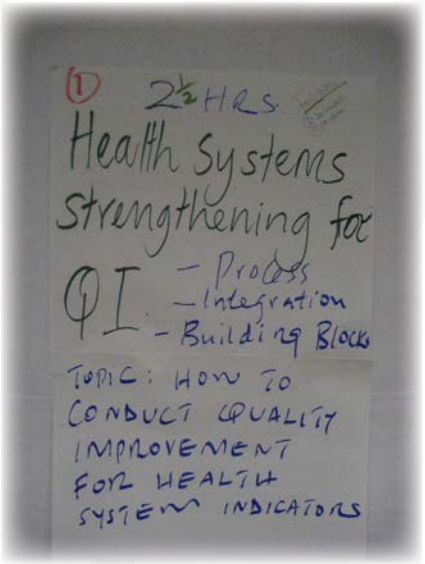
- A self-organizing method to facilitate participant-driven learning sessions
- No pre-planned agenda. The session topics are developed by the participants and reflect what is important to them.

Developing the Agenda

- Participants choose topics for sessions that they will facilitate and own
- Topics with facilitators' names are posted on the agenda wall
- The facilitators schedule the agenda with days and times for each session
- Participants sign-up for sessions
- Facilitators review/revise the schedule
- New sessions can be added at any time

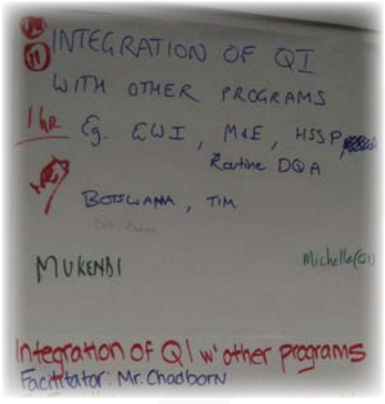
Tuesday's Open Space sessions:

- Data management
- Consumer involvement strategies
- Pediatric Disclosure
- Health systems strengthening



Wednesday's Open Space sessions:

- Retention strategies
- Improving cervical cancer screening
- Pediatric ARV adherence
- QI and advanced technology
- Integrating QI into other systems and programs



Thursday's Open Space Sessions:

- Effects of health care worker attitudes
- Training models
- Transition of QI to government ownership
- Sustainability for effective quality improvement

PLENARY PRESENTATIONS:

Tuesday, February 23: Dr. Richard Banda, Technical Officer for HIV Drug Resistance, WHO-AFRO delivered the ACLN's first plenary focused on the WHO HIV drug resistance prevention and assessment strategy, including early warning indicators (EWIs).

This presentation focused on the need for regular assessment of HIV drug resistance EWIs, and coordination between EWIs and HQI to reinforce linkages and use of resources. Dr. Banda emphasized joint goals of performance improvement in the EWI and QI programs, and the value in resource limited settings.

Thursday, February 25: Dr. Tendesayi Kufa of South Africa's Aurum Institute presented a public health approach to TB elimination. Her plenary provided an overview of the global plan to stop TB and Millenium Development Goals (MDGs) (MDG 6 seeks a 50% reduction in TB by 2015), TB epidemiology, a framework for TB control and other strategies to eliminate TB.

Dr. Kufa stressed the need to improve detection, expand DOTS, engage in active case finding, improve symptom screening and address TB/HIV coinfection. She concluded by emphasizing the scale-up of prevention and importance of new drugs, vaccines and diagnostics.

Dr. Magdaleena Nghatanga and Dr. Ndapewa Hamunime, MoHSS, Namibia

HIVQUAL Namibia: Update on the 3 I's

Dr. Ndapewa Hamunime (pictured at right) Senior Medical Officer, Namibia MoHSS provided an update on the 3 I's from Namibia, where 59% of TB patients are co-infected with HIV. Dr. Hamunime's presentation provided a concise overview on the role of QI in identifying and implementing strategies to address the country's dual TB/HIV epidemic. The presentation emphasized both the critical and strategic links within the national HIV program, describing Namibia's decision to establish an HIV/TB technical working group, which meets monthly and is chaired by HIV and TB divisions on a rotating basis. She discussed the incorporation of TB and HIV policies, guidelines and strategic plans; co-location of HIV and TB facilities; and the appointment of an Infection Control Officer.

Namibia is currently Intensifying case finding efforts throughout all ART facilities to identify undiagnosed TB cases among PLWHA. Dr. Hamunime's presentation focused on the value of systems in a national effort to address TB, and described the processes implemented to achieve this goal, including symptom screening and client education at each clinic visit. Patients with TB are referred to a TB-specific facility to receive TB care and continued HIV treatment. Namibia's public health approach to TB treatment and control is focused on maintaining continuity of care and preventing stockouts of essential drugs. This strategy involves the scale-up IPT for all eligible patients, the mandated stocking of INH medicines in ART facilities, and the provision of IPT and associated education to all eligible patients. Infection control guidelines will soon be finalized and implemented, along with facility renovation specific to the needs of TB service.

Namibia's specific challenges represent common obstacles experienced across country programs, including human resource shortages, infrastructure problems, high HIV/TB burden, the need to strengthen TB/HIV collaboration and improved program management.

High level political commitment and high coverage rates position Namibia to successfully press ahead with continued integration of HIV and TB efforts across the spectrum of QI. Dr. Hamunime praised the Namibia health care system for the capacity to address this critical issue at the community level, and commitment of staff in managing this dual epidemic. Namibia's use of regional groups has also played a critical role in advancing QI implementation across the country.

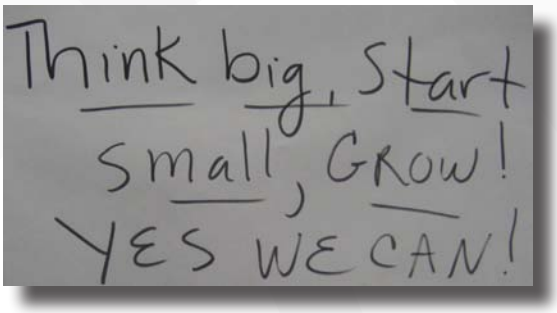
The Namibia team plans to improve TB infection control through education, renovation, engineering (facility renovation) and personal protection. Guidelines and safety precautions will be routinized as HIVQUAL implementation broadens, along with increased emphasis on the 3 I's. Finally, the team will advance QI efforts through reinforced reporting, and leadership within the HIV/TB technical working group.

FUTURE DIRECTIONS:

Friday, February 26
Joshua Bardfield, HEALTHQUAL communications manager discussed facilitating cross-country communication. This included an overview of the HQI newsletter, website, and the unveiling of the HEALTHQUAL Project Space to build, enhance and sustain peer-to-peer interaction between all countries.

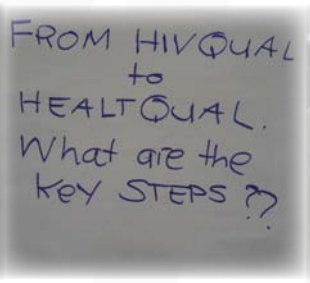
To close the ACLN, Dr. Agins facilitated a group discussion focused on sustaining the broader engagement initiated during the week's events. Next steps were established as follows: to continue cross-country communication and create an "inventory" of interventions for improving patient retention. HQI staff agreed to develop a list of countries organized by programmatic strengths, designed to assist new countries in tapping into more advanced programs as a resource for peer learning.

The ACLN provided a vibrant forum for the exchange of information and ideas. The diversity of participants, rich dialogue, and depth of peer interaction facilitated by Open Space is captured by this newsletter and in the variety of lessons learned, including (but not limited to): the power of peer learning, data management, incorporation of HIVQUAL into pre-existing systems, learning models for training at different levels, application of varied approaches to sustainable program implementation, lessons from the challenges and practices of other countries and how they are used in the planning process, integrating quality into the national/ministry program, strategies for retention, tools for pediatric disclosure, and...



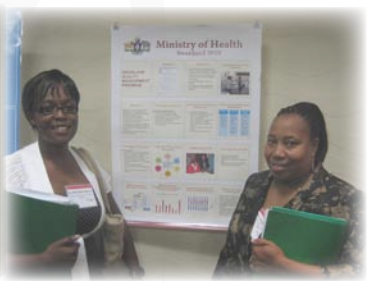
For more information on the All Country Learning Network in Johannesburg, please visit us on the web at WWW.HEALTHQUAL.ORG

Dr. JH Mukendi Kazadi of Botswana facilitating an open space session



Open Space session development and sign-up

Drs. Rawiwan Hansudewechakul & Rangsima Lolekha of HIVQUAL-T facilitating an open space session



Dr. Sithembile Dlamini & Thembie Dlamini MOH Swaziland

HEALTHQUAL is supported through the US Department of Health and Human Services, Health Resources and Services Adminsitration as the International Quality Center for PEPFAR.

For more information on HEALTHQUAL or the HIVQUAL International Update, please contact Joshua Bardfield at jeb16@health.state.ny.us.

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UPDATE

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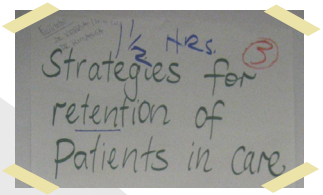
A FOCUS ON RETENTION



With a scarcity of current literature addressing retention, research is often limited to a single clinic or intervention and controlled trials are impractical. The All Country Learning Network in Johannesburg, South Africa served as a platform for advancing a cross-country discussion on retention strategies and interventions. This issue of the HQI Update will focus on a few innovative strategies initiated by implementing partners.

Patient Retention on ART: The Case of Swaziland

In January 2007, 17,160 patients in Swaziland were enrolled in ART, while 23,371 were classified as "ever enrolled" in treatment. In less than two years, those numbers had nearly doubled to 32,707 and 41,382 respectively. In examining performance data, the national AIDS program discovered that overall retention decreases significantly between 6 months and 36 months; from 2005 to 2008 there was a nearly 20% reduction in overall retention.

Given strong evidence that retention is essential to increased survival in people living with HIV, the government of Swaziland has undertaken a series of interventions to increase this important measure of care.

At the Mankayane Government Hospital*, for example, in 2006, one-year ART retention was at 60%. Hospital staff were not actively identifying patients lost to follow-up, and had no strategies in place to contact patients. This included no means of transportation and no dial-out telephone service.

When a facility-level data assessment (non-HEALTHQUAL) revealed limitations in this area of care, staff were compelled to implement several interventions aimed at a broad and systematic effort to improve retention.

continued on page 2

**Swaziland's ART services and the Mankayane Government Hospital are supported in part by ICAP-Swaziland.*

A Strategy for Retention: Nigeria

There are currently 269 sites in Nigeria providing ART services with a lost to follow-up rate of approximately 17%-30%

In Nigeria, lost to follow-up is defined as: "a registered ART patient who has not reported to an ART service point for 3 months since his/her last visit AND it is not known if the patient has died or transferred out or stopped treatment for documented medical/social reasons." A missed appointment: "is a registered client or patient who has missed a scheduled appointment."

Contact tracking is a central retention tool in Nigeria, involving a multi-step process in which all prospective ART patients receive three adherence counselling sessions to promote increased adherence and retention; patients who miss appointments (>7 days) are tracked through phone calls by health facility staff or home visits by patient volunteer support group members; if a patient is absent for more than three months and without status, an update in the ART register is completed by site personnel, adherence counsellors, site M&E and support groups; patients unsuccessfully tracked are classified as lost to follow-up (LTFU) while others with known outcomes (i.e. death, stopped treatment) are subsequently documented. The ART register is then updated by site M&E to reflect the patient's current status.

continued on page 2

A defaulter tracking system was instituted; staff developed support tools, including a call register and interview telephone guide; and provided cellphones and pre-paid calling cards to patients. The hospital began using a database to generate a list of patients based on missed appointments (>7 days), review of patient files to confirm and obtain contact details, and telephone follow-up with patients (dial-out service was restored).

These focused measures produced positive results: between April 1 and November 30, 2007, of the 395 patients beginning on ART 74 had missed appointments (82% rate of retention).

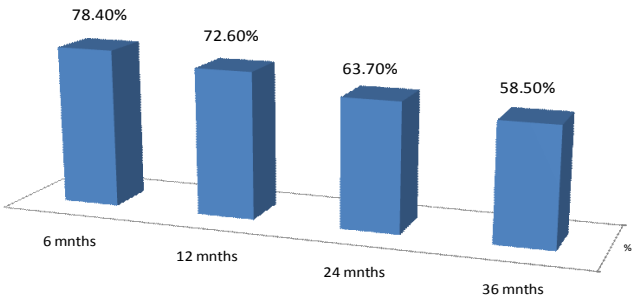
This project was successful because of involvement by ART clinic staff in project design, and their direct participation in development of tools and adjustments during the pilot.

A program review was instituted to avoid misuse of the hospital phone (a previous problem), and telephone follow-up became a key feature of the adherence project, including additional adherence counseling and telephone-based support services.

Staff also identified several areas for additional improvement, such as consistent updating of the patient database, and the use of other paper-based systems as an alternative. Although telephone communication was considered integral, staff recognized its limitations and plan to conduct additional home visits. Adherence counseling for returning defaulters is also critical.

Patient follow-up is key to quality HIV care and treatment, and planned next steps include a patient follow-up system to be rolled-out to all ART facilities in Swaziland. This system will include DNA PCR test results and CD4 cell count. A patient involvement mechanism is also planned.

Overall retention on ART, 2005-2008



Source: Swaziland MOH, 2010

Additional retention tools employed at the national-level:

Patient tracking tools:
- SOP for patient contact tracking
- Pharmacy appointment diary
- Patient contact tracking register
- ART patient tracking monthly summary form

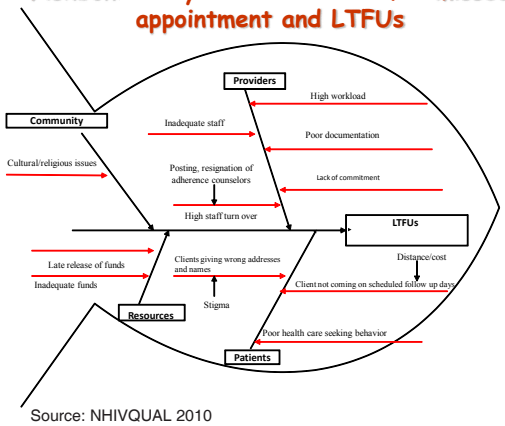
Patient transfer tools:
- Patient transfer form
- Patient transfer registers (incoming and outgoing).

Patient registers:
- ART register
- EMR

Patient referral tools:
- Referral directories
- Client referral form
- Referral register

In an effort to improve lost to follow-up, programs engaged in several process tools: fishbone diagrams; monthly data analysis at national and state level to identify gaps and issues for follow-up; development of an SOP to standardize patient tracking processes and improve reporting on lost to follow-up; and use of EMR to aid auto-generation of patient list for contact tracking.

Fishbone analysis: root causes for missed appointment and LTFUs



Source: NHIVQUAL 2010

Funding for patient tracking, quality of patient records (incomplete address, phone), generation of list from pharmacy, patient hostility, and involvement of support groups are continued areas of focus.

Next steps include decentralization of ART services (ARV refill at PHCs); strengthening adherence counseling; strict adherence to contact tracking SOPs so that defaulters are tracked early; improvement in the quality of documentation; and use of patient support group members.

Retention of care in Kenya

Kenya's Ministry of Health and implementing partners have utilized a variety of patient retention care and treatment strategies, though there is no uniform national-level strategy in place. Patient retention has only been measured once during Kenya's early warning indicator HIV drug resistance (EWI-HIV DR) pilot survey of 2008.

Dr. Davies Kimanga (Kenya) and Dr. Sithembile Dlamini (Swaziland) facilitate an Open Space Session on retention at the ACLN in Johannesburg, South Africa

Retention interventions include: decentralization of care and treatment services to lower levels of health care to reduce travel distance for patients; linking patients to community health workers who follow-up to ensure appointment keeping; and the MOH community strategy which takes health services to the community through community health units. In Kenya, there is a community health worker for every 20 households.

In addition, rigorous patient preparation is recommended prior to initiation of treatment. In this case, facilities use a buddy system to provide information and counseling to support adherence. Patients are also asked to complete three adherence sessions prior to beginning their treatment on ARVs. Adherence to treatment counseling is conducted at every visit, as well as follow-up with defaulters, including patient tracking using community health workers and phone calls to remind patients of their appointments.

In Kenya, one EWI for HIV-DR relevant to patient retention is the percentage of patients lost to follow-up (target ≤ 20%) (definition: % of patients initiating ART who are lost to follow-up 12 months after starting ART); and ART appointment keeping (target = 80%) (definition: % of ART patients attending clinic appointments on-time / % of persons initiating ART who attended all appointments on time during the first 12 months of initiation on ART).

Over 80% (15/18) of sites achieved set target of ≤20% More than half (10/18) of the pilot sites were able to achieve the target of ≥70% patient retention on first line after 12 months.

None of the 18 sites achieved the target for at least 80% of patients keeping scheduled appointments, and challenges remain.

Funding is crucial to compensating community health workers who are supporting patient follow-up in public health facilities and providing financial support for calling patients to remind them of their visits, as well as securing payment arrangements to support patients who cannot afford bus fare to clinic.

Continuity of Care: Mozambique

Catandica Rural Hospital is located in Manica Province near Mozambique's western border with Zimbabwe. Round one performance data demonstrated the need for increased focus on continuity of care (25% retention at round one).

Armed with the knowledge that patients abandon treatment for a number of reasons, including transportation problems, lack of education and stopping treatment when they feel better, Catandica Rural Hospital utilized retention strategies consistent with those applied throughout many of Mozambique's health facilities.

First, the pharmacy produces a list of patients who have not picked-up their medicines or who do not return on a regular basis. Next, a staff person, usually the receptionist, produces a list of patients who have missed their follow-up appointments. Both lists are then presented to the ART committee for review.

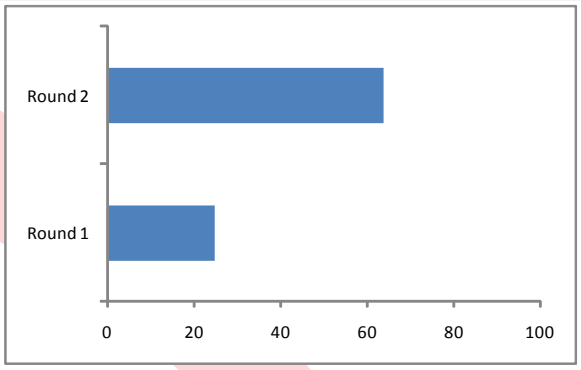
continued on page 4

Continuity in Mozambique, continued from page 3

The ART committee meets on a monthly basis to discuss retention, and engages "activistas" (community volunteers) to locate patients in their homes and motivate them to return for continued treatment. The ART committee also partners with NGOs responsible for delivering home-based care for PLWHA, and works with those organizations as well to locate patients lost to follow-up. In both cases, patients are presented with information detailing why continued treatment is essential to their care.

Every Friday an ART meeting is convened with ART patients (called "ART coffee") to discuss issues associated with hospital service quality and reinforce ARV treatment adherence. Patients are asked to assist in locating those lost to follow-up in their communities and convince them to return.

% of patients achieving continuity of care (two rounds)



Source: Catandica Rural Hospital

As a result of this intervention, the continuity of care indicator more than doubled to 64% in the second round data collection cycle.

Since travel distance and cost is a significant burden for many patients, some have suggested creating a system where patients rotate responsibility for travel to the clinic and then deliver medications to other patients in their community.

Staff is currently working to alleviate additional challenges posed by transportation issues and consistent recording in patient charts.

Retention Interventions from Botswana

- **Decentralization:** Decentralized health care system which promotes access to services.
- **Co-Location of Services:** Health care system is integrated, providing multiple services at a given location [One Stop Shop].
- **Task-Shifting:** Lay health care workers can provide counseling and nurses can prescribe and dispense ART's to stable patients after initiation, reducing patient wait time.
- **Buddy System:** Clinic peers support the client; reminding them of appointment times and helping them cope with issues including treatment compliance, stigmatization and isolation.
- **Supply-Chain Management:** In order to reduce and prevent stock outs of ART's, proper management of the supply chain is necessary; stock-outs affect patient retention.
- **Peer Mother Psychosocial Support:** In PMTCT programs, these support groups help newly diagnosed mothers through counseling and adherence support. (Strengthen link to retention)
- **Public-Private Alliances:** This model allows patients to see private doctors for care and to receive reimbursement from the government to cover the costs of private care.

continued on page 5

Retention Interventions from Guyana

- **Outreach workers:** PLWA workers use a standardized form to target patients with missed appointments. Patients may be more comfortable with outreach workers than health care workers.
- **Home Care Workers:** Health care workers conduct home visits.
- **Expert Patients:** Expert patients link health care workers and peers.
- **Support Groups:** Support groups exist at each site. Patients are reimbursed for transportation to support groups and are provided with snacks at the support group.
- **"DOT" workers:** Workers who visit homes. However, some patients opt out of home visitation.
- **Active Patient Follow-Up:** Utilize multiple proactive strategies (Follow-up on specific activities)
- **Phone follow-up:** Phone calls after all missed appointments, to find out why patients are not coming to clinic.
- **Contact Tracing of Previous Sexual Partners:** Contact tracing is done to identify recent sexual partners and bring them into care.

continued on page 5

Botswana, continued from page 4

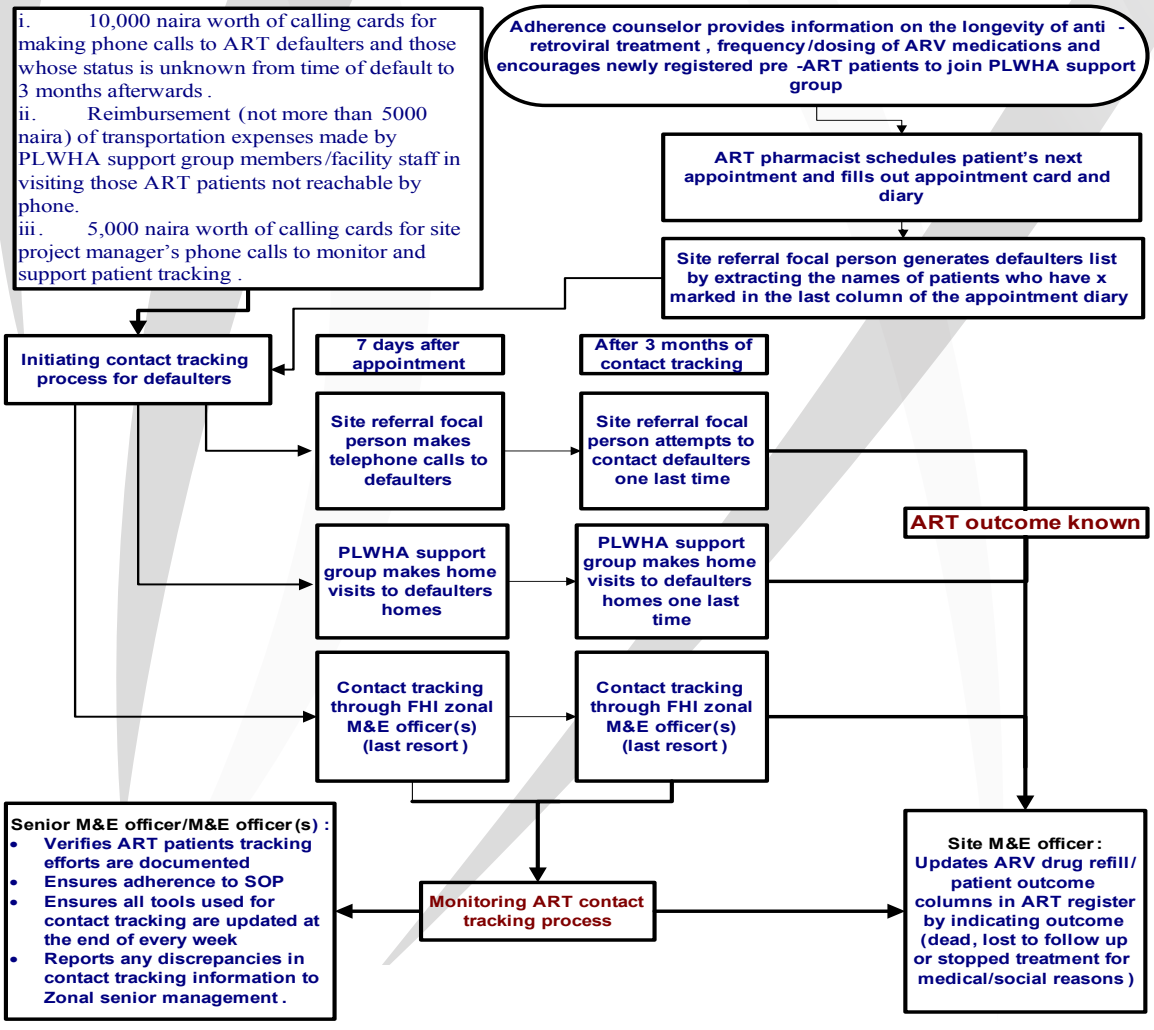
Further, it alleviates the burden of wait time in both private and public clinics. Privacy issues are also addressed, as some patients do not want to be seen/identified in public facilities.

- **Community Home Based Care:** Community members assist patient with care and inform health care workers of the patient's health status.
- **Family Welfare Education:** A family welfare educator is a community member who works at the community clinic but is familiar with the services in the community and visits patients in the home to conduct basic assessments.
- **Alignment of Patient Appointments:** The facility is encouraged to schedule all patients' appointments, including blood draws and clinical visits, on the same day, to decrease frequent visits to the clinic. [One Stop Shop]
- **ART Roll-Out:** ART services in health outposts to increase access to care and availability of treatment.
- **Patient Volunteers:** Community members who volunteer to assist patients on care

Guyana, continued from page 4

- **Patient Information Validation:** In order to enroll on ARV's, patients bring formal identification in the form of a national ID card which ensures accurate contact information.
- **Incentives- Voucher program:** Vouchers are provided to patients with low CD4 counts and other pre-identified issues in care (i.e.- poor nutrition as defined by certain standards). Receiving vouchers is dependent on adherence to treatment
- **Information Systems-Tracking Clinic Attendance:** Use of a shelving system to easily identify which pediatric patients attended their visits for the day. Charts remaining on the shelf at the end of the day identify patients who did not show up for their appointments.

Process Diagram for patient tracking in a partner program: NIGERIA



Summary of Models

As the All Country Learning Network came to a close in Johannesburg, a large group discussion between all countries focused on models for retention. This group conversation drew from each individual country experience and provided for a strategic snapshot of retention models and methodologies.

The conversation first focused on addressing retention through the use of information systems / documentation by tracking, patient registers, tracking referrals and transfers.

An Open Space discussion on retention sought to classify QI activities into four categories: 1) education, 2) tracking, 3) consumer involvement and 4) coordination. During that session, challenges to retention were identified in three categories - clients, health care workers and systems (below):

Client	HCW	Systems
Adverse drug effects	Staff motivation	Facility hours
Client satisfaction	Staff attitude	Space
Clinic location	Lack of knowledge	Infrastructure
Stigma/Disclosure	Ethics/Professionalism	Patient flow
Sociocultural		Waiting Time
Feeling Better	Ratio of HCW/patients	
Misconception/Lack of understanding		Lack of integrative services
	Staff retention	
	Staff Shortages	
		Stock-outs

In response, the Open Space group expanded on the four focal areas mentioned above. 1) **Education**: effective patient counseling and standards of care, as well as health care worker-level capacity building. 2) **Tracking/Monitoring**: frequently updated patient contact information and accurate documentation (i.e. when a patient transfers in and out of care). 3) **Consumer involvement**: use of patient satisfaction surveys, buddy system, and support groups. 4) **Coordination**: Implementation of provider satisfaction surveys, attention to waiting times and patient flow, task shifting, facility infrastructure and equipment, decentralization, integration of services, family care model, partner support and free treatment.

In Botswana, the MOH is preparing to use SMS technology (text messaging) for adherence and appointment reminders, targeting TB/HIV patients, adolescents, and patients who have been identified as having difficulty with compliance; this will be done over the next year along with integration of IT systems for PMTCT, routine HIV testing and ARV clinics to look at referrals between systems and to gain further understanding of loss to follow-up.

In NYS, Quality Improvement Learning Networks have been focusing on retention in care, stressing educational interventions including targeting staff and/or patients; case management; use of community resources/multidisciplinary teams; administration procedures/coordination strategies, such as pre- and post-visit reminder interventions; and clinic operations and information systems.

ACLN participants established a series of next steps characterized by the goal of increasing peer-to-peer exchange in the development and implementation of various retention strategies. Advancing this discussion may lead to the development of an accessible classification tool for use across countries categorizing retention activities.

HIVQUAL is supported through the US Department of Health and Human Services, Health Resources and Services Adminsitration as the International Quality Center for PEPFAR.

For more information on HEALTHQUAL or the HIVQUAL International Update, please contact Joshua Bardfield at jeb16@health.state.ny.us.

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BRIEF
VOLUME I, ISSUE I

The following HEALTHQUAL Brief is the first in a four part series addressing quality improvement in tuberculosis care and treatment.

Tuberculosis: Improving Care and Treatment Through Quality Improvement

UGANDA

Kumi Hospital

Kumi Hospital, a rural, not-for-profit facility and the national referral hospital for TB in eastern Uganda, is located almost 200 miles from the capital city of Kampala. With a 350 bed capacity, Kumi has become a destination for the region's most vulnerable individuals, providing a wide-variety of clinical services from primary care to TB.

At baseline, staff discovered that only 35% of eligible patients were assessed for TB, defined by a clinical symptom screen based on national guidelines.

Uganda guidelines recommend TB symptom screening for the existence of a cough for more than three weeks, weight loss, hemoptysis, night sweats, and evening fevers.

These findings compelled a series of improvement activities undertaken to improve performance in this area of care.

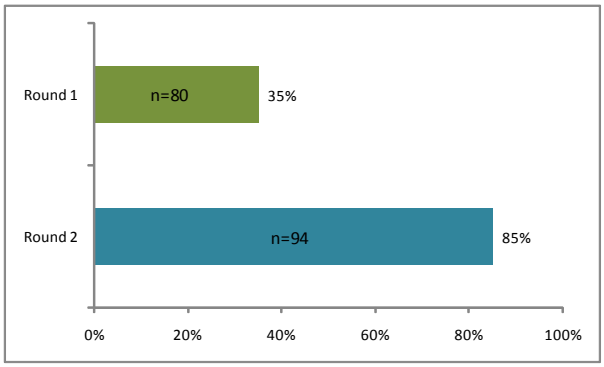
First, hospital personnel established a **designated TB staff** member to coordinate QI work. Scheduling of weekly **patient education** and **routine education of all clinic providers** reinforced **institutional knowledge** of TB, and served as a systematic means of ensuring commitment to improving TB care. Staff conducted **home visits** for patients not returning for test results. The team emphasized **recording of all test results** - both negative and positive - in patient charts, and hired two additional lab technicians to assist with screening. Other activities included: **improved monitoring systems to prevent medication stockouts** - a key to continuity of treatment and prevention of drug resistance, and consistent recording of meeting minutes from weekly QI team meetings.

As a follow-up measure to this intervention, staff decided to review a sample of four physicians' charts one day in July, August and September.

This review demonstrated that TB assessment was consistently recorded in more than 90% of all charts.

Performance rates for TB assessment subsequently increased from 35% at baseline, to 85% at round two data collection.

% of Patients Assessed for Tuberculosis (two rounds)



Source: Kumi Hospital

Performance improvement in TB assessment has compelled ongoing investigation in other areas. The adopted systems of measurement revealed that of all cases screened (diagnostic evaluation) for TB (TBS), only 25% had actual results noted in the patient record. This will now become a primary focus of improvement.

In addition to the methodical and evidence-based approach applied to TB assessment, this program has achieved success because of strong commitment from the entire team throughout the QI process, and is further strengthened by complete support from hospital administration leadership.

HEALTHQUAL is supported through the US Department of Health and Human Services, Health Resources and Services Administration as the International Quality Center for PEPFAR.

For more information on HEALTHQUAL or the HEALTHQUAL Update, please contact Joshua Bardfield at: jeb16@health.state.ny.us.

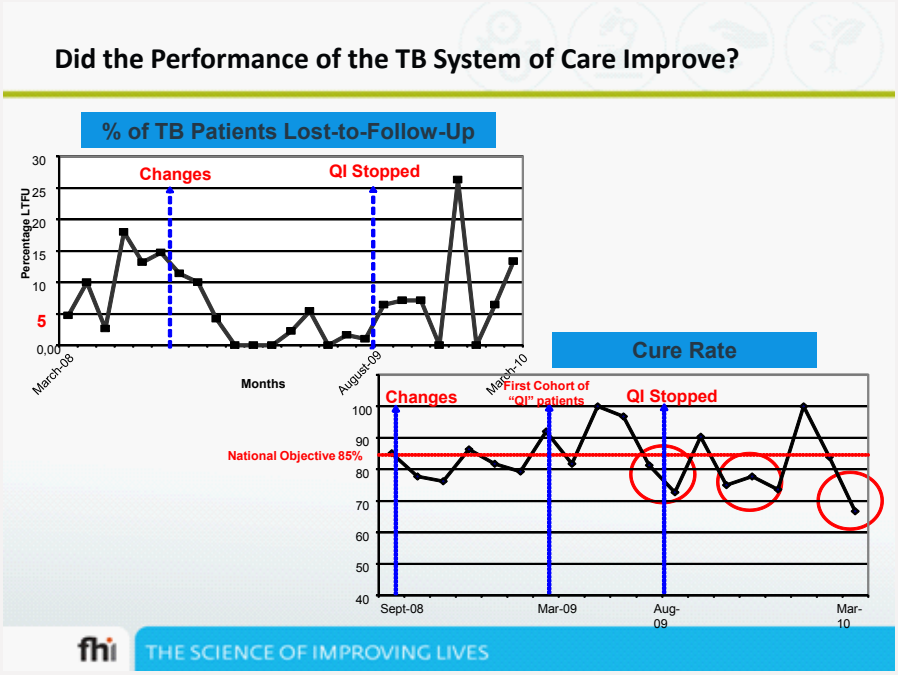
PARTNERS' CORNER: FHI-SENEGAL*

Service Delivery as an Entry Point to Health System Strengthening - A Case Study from FHI/Senegal: Improving the Tuberculosis System of Care

The following is a case study of a QI effort conducted in partnership with the Senegal Ministry of Health (MOH) - National TB Program, MOH- National Quality Program, District Health Team in Mbao, Senegal, and the FHI/Senegal Technical team. This effort aimed at improving tuberculosis patient care in Mbao District, Senegal with the goals of decreasing the proportion of patients lost-to-follow-up from 23% to below 5% and increasing the cure rate from 55% to more than 85% to achieve the national targets.

This pilot project used the collaborative model for improvement, with the following steps: *improvement objectives, systems analysis and QI teams; monthly monitoring of process/output/outcome measures on run charts; coaching of QI teams/health providers; testing changes through PDSA (Plan-Do-Study-Act); learning sessions to share results and ideas; followed by the scaling-up of improvements.*

An improvement matrix was developed to identify processes, objectives and results throughout the sequence of identification of potential TB cases, physical and diagnostic screening, care and treatment, follow-up, final evaluation and discharge. A package of changes led to improvements in HIV testing, same-day initiation of TB treatment, directly observed intake of TB drugs (directly observed therapy - DOT) as monitored by a family member or other individual, and bacteriological sputum exams, as measured through run charts.



Source: FHI 2010

To improve TB patient care in the above noted areas, several specific improvement activities were undertaken. To identify chronic coughers and facilitate entry into care, community health workers began integrating TB information into community talks, worked to identify chronic coughers during home visits, and referred chronic coughers to a health facility. Service delivery was reinforced through the extension of lab hours for sputum smear exams, assignment of two lab technicians to perform these exams, and appointment of a lab technician to accompany patients to the health center. HIV testing and counseling was made available to TB patients and DOT monitors were identified to take note of daily TB drug intake.

Treatment completion and cure rates were measured by tracking patients lost-to-follow-up and contacting them to engage them in care. The following data clearly demonstrate improvements in outcomes. The "% of TB Patients Lost-to-Follow-Up" and "Cure Rate" charts above exhibit evident improvements between the start and stop of tested improvement activities, in which the proportion of lost patients decreased, and the cure rate increased. When teams stopped the QI activities, improvement indicators decreased.

This case study served as the basis for designing the scale-up of improvement efforts to all districts of the Dakar medical region. This case study provides evidence for making QI an integral component of public health programs aiming to achieve disease specific health outcomes while contributing to the larger health systems strengthening strategy.

For More Information on this Case Study Please Contact:
Dr. Barbara Sow, FHI Country Director, Senegal: bsow@fhi.org
Dr. Bruno Bouchet, FHI Director for Health Systems Strengthening: bbouchet@fhi.org

**FHI Senegal and HEALTHQUAL are independent organizations. HEALTHQUAL was not involved in this case-study.*

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BRIEF
VOLUME I, ISSUE II

The following HEALTHQUAL Brief is the second issue in a four part series addressing quality improvement in tuberculosis care and treatment.

Tuberculosis: Improving Care & Treatment Through Quality Improvement

NAMIBIA

A Public Health Approach to Tuberculosis Care & Treatment: Quality Improvement Lessons From HIVQUAL Namibia

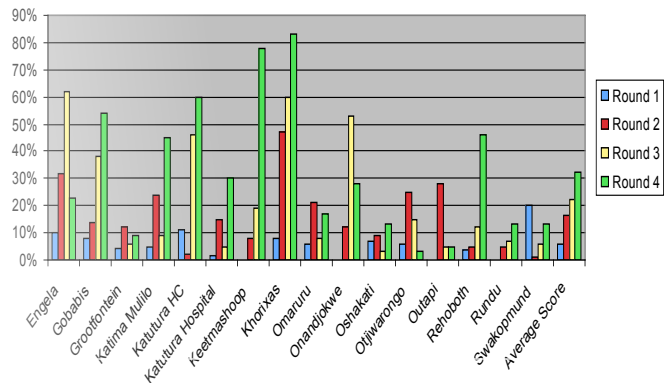
Dr. Ndapewa Hamunime, Senior Medical Officer, Namibia Ministry of Health and Social Services (MoHSS) champions the integration of the 3 I's (intensified case finding, infection control and isoniazid preventive therapy) into the national HIV treatment program. The MoHSS has embraced quality improvement (QI) as an integral component of the government-led strategy for implementation of a national framework for TB prevention, care and treatment.

In Namibia, there are an estimated 204,000 people living with HIV (PLWHA), and 59% of TB patients are co-infected with HIV. In 2007, the case detection rate of new smear positive tuberculosis cases was 84%, and treatment success in that cohort was 83%.

A public health approach to quality improvement is integrated into the MoHSS program as part of a systems-level strategy to address TB control and treatment, and reinforced through high-level political commitment. This strategy is an essential component of Namibia's national program and highlights the need to expand the principles of QI throughout health systems.

This national improvement strategy is adopted by local clinics implementing QI as a model to improve patient care. For example, at Rundu state hospital in the Kavango region, staff chose to focus on TB-IPT. A system was established to **screen all HIV patients** and **initiate IPT for those without symptoms** of TB. A **screening tool** was adopted along with a **check-list** to ensure **notation of IPT screening in patient charts**. An **INH register** was utilized to monitor and track patients, and all staff were strongly encouraged to complete these steps thoroughly for each patient at each visit. In addition to a focus on screening, some task shifting occurred. Previously, doctors were exclusively assigned the role of IPT initiation for patients. Once the QI activity began, this role was expanded to nurses to free-up physician time and spread responsibility. This systematic QI approach, involving multiple staff, improved institutional awareness of care and treatment gaps experienced by patients, and empowered staff to better monitor patient care. Improvement activities emphasized the importance of patient education about IPT and improved patient outreach in the region.

% of eligible patients prescribed isoniazid preventive therapy



Source: HQ-Namibia

Dr. Magdaleena Nghatanga and Dr. Ndapewa Hamunime, Namibia MoHSS

At the Outapi ARV clinic, an early analysis of baseline data (0%) revealed the need for an increased focus on TB care. A QI team was established and tasked with analyzing the ongoing process of TB screening and IPT initiation. This analysis revealed several areas for improvement including **documentation, screening, staff motivation and patient/staff education**. To address these areas of performance, the clinic established **physician-led education sessions** focused on TB screening and IPT eligibility, including instruction on **how to prescribe IPT**. A **screening tool was introduced** clinic-wide and **posted in all consulting rooms**. To bolster this effort, the data clerk gave a presentation on **proper documentation in the patient record**. In addition, existing health education for all TB patients and those on IPT was enhanced to **reinforce the importance of treatment and care** and to dispel myths and misconceptions discovered as barriers to care. Performance rates improved by 5% between baseline and Round 4 data collection.

A test of change and later review of these activities led to additional changes. A red sticker is now placed in all patient records as a prominent marker of IPT initiation. Patient confusion between IPT and cotrimoxazole (CTX) prophylaxis prompted a change in health education, where patients are now shown both IPT and CTX to emphasize differentiation. During this process, it also became clear that some patients had previously received IPT and discontinued care before presenting at the clinic again. As a result, staff are now tasked to inquire and record if IPT was initiated at some earlier date to better monitor this area of care.

Outapi staff learned to value the importance of patient involvement in care quality, and staff motivation was boosted with increased involvement in care processes.

The HQ-Namibia team plans to advance improvement of TB infection control, and remains focused on the great need to continue integrating these improvement activities into the national TB/HIV strategy. This includes foremost, the noted implementation of QI at HIV clinics to improve processes of care for HIV and TB. Guidelines and safety precautions will be routinized as HIVQUAL implementation broadens, along with increased emphasis on the 3 I's. The team will continue to advance QI efforts through reinforced reporting, and leadership within an HIV/TB technical working group.

HEALTHQUAL is supported through the US Department of Health and Human Services, Health Resources and Services Administration as the International Quality Center for PEPFAR.

For more information on HEALTHQUAL or the HEALTHQUAL International Update, please contact Joshua Bardfield at jeb16@health.state.ny.us.

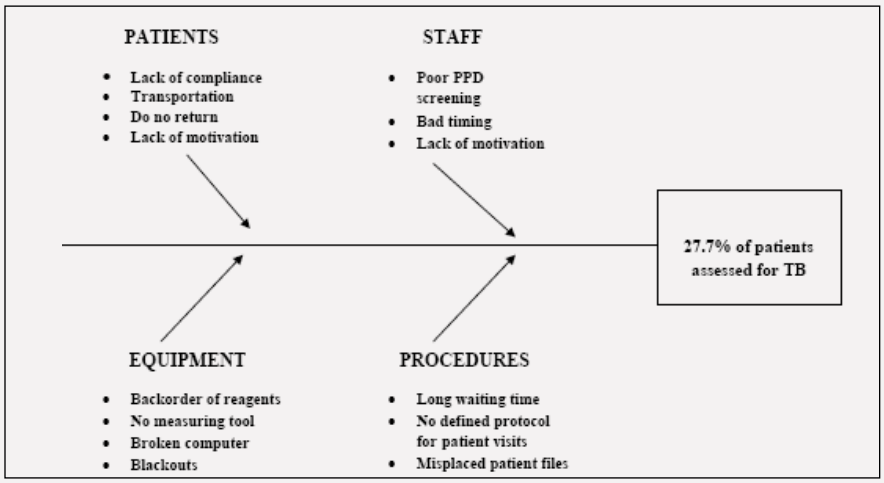
Hôpital St.-Antoine de Jérémie: Haiti

TB Assessment

Hôpital St.-Antoine de Jérémie, located in western Haiti, serves nearly 1000 adult patients living with HIV.

Staff at St.-Antoine de Jérémie established a team dedicated to the improvement of TB services. The seven members included one doctor (team leader), one lab technician, one nurse, two auxiliary TB staff, one data clerk, and one outreach worker. The team instituted meetings beginning on the first and third Friday of every month at 2:00PM. They also allowed for ad-hoc meetings to be scheduled as needed. The team utilized several strategies to investigate processes of TB care, having identified the need for improvement based on data. For example, they used the fishbone diagram to carry out root cause analysis (pictured). Brainstorming sessions produced a number of strategies to improve care.

Fishbone Diagram Analyzing TB Assessment



Source: Hopital St-Antoine de Jeremie

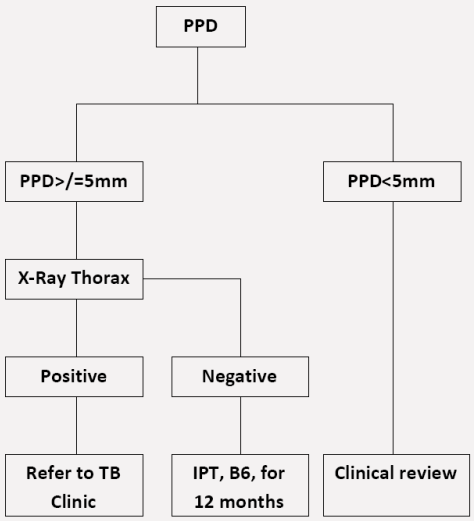
First, the team recognized the need to educate patients about TB, and set out to strengthen patient counseling to emphasize the importance of PPD skin testing for latent TB.

To ensure an appropriate and effective course of action throughout the process of patient interaction at the facility-level, the team developed a systematic approach to the process of PPD testing that included implementation of the national flow chart algorithm (below) that is used for TB screening and IPT administration. This approach involved a number of steps including the entire staff.

The data clerk was tasked with preparing a list of patients requiring PPD testing, based on clinical screening, and presenting it to doctors and nurses responsible for administering the tests.

Next, staff assigned one team member to personally accompany patients to the lab for PPD testing. Another staff member was asked to receive PPD results, and assume responsibility for delivery of results to the data clerk for entry into the electronic medical record (EMR). Frequent electricity outages prompted the team to back-up their work with handwritten lab results. Through further meetings and analysis, the team acknowledged follow-up of patients who did not return for reading of the PPDs had been limited. As an improvement strategy, hospital management agreed to allocate funds to cover transportation costs for patients to return.

HAITI: NATIONAL (PATIENT) FLOW CHART FOR PREVENTION AND TREATMENT OF TB



Source:Hopital St-Antoine de Jérémie, 2009

Although Jérémie's QI approach did not immediately produce improved performance rates due to staffing issues and stock-outs, continued focus on QI activities eventually produced demonstrable achievement in TB performance over time, with the % of patients assessed for TB increasing more than 12% between review periods, from 26.2% to 38.3%. Hospital staff gained tangible skills and insight through their QI work. They came to value the importance of regular system level process analysis to establish a basis for program evaluation and follow-up. The team also recognized the implications of the QI process for providers in developing a systematic approach to decision making, and as a result, the attainment of better outcomes.

*Services at St.-Antoine de Jérémie continue uninterrupted by the January 2010 earthquake in Haiti.

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BRIEF
VOLUME I, ISSUE III-IV

The following HEALTHQUAL Brief includes the third and fourth issues in this four part series addressing quality improvement in tuberculosis care and treatment.

Tuberculosis:

Improving Care and Treatment Through Quality Improvement

An Update from HQ-Mozambique: TB Screening at Ulongué Rural Hospital

The Ulongué Rural Hospital, also known as Angonia Rural Hospital, is located in Tete Province, in Mozambique's central region.

A team comprised of members from the quality committee was nominated to evaluate TB screening scores from the second round of performance measurement. Their analysis of performance rates for TB screening uncovered several areas for improvement among the ART and pre-ART populations.

An initial investigation revealed that the hospital ran out of TB screening forms, an essential tool both as a basic prompt to clinicians to conduct TB screens for HIV+ patients, and as a guide to assist clinicians in each step throughout the screening process.

Emphasis on the need for multiple combined interventions

- **Reporting documentation systems**
- **Policy**
- **Organization of systems**
- **Staff motivation**
- **Engaging leadership**

Without these forms, clinicians were often not conducting TB screening, or completing the screening but not registering this information in patient charts. In cases where charts did contain the form from a previous visit, clinicians were not regularly monitoring patient records to ensure it was completed fully and properly. The team also discovered that Ulongué Hospital had no official schedule to conduct TB screenings.

In addition, the team found gaps in coordination between the TB and HIV/AIDS departments, leading to missed screening opportunities and little sharing of patient information across divisions. For example, their analysis found that patients seen at the TB department were not screened for HIV, and HIV patients seen in the HIV/AIDS department were not screened for TB.

Continued on page 3

An Update from Pediatric HQ-Thailand: Quality Improvement in HIV/TB

Thailand is 19th among the World Health Organization's list of 22 high burden TB countries representing 80% of all global TB cases. Of the 9.2 million new TB cases occurring each year, approximately 10% are in children. According to the UN General Assembly Special Session on HIV/AIDS (UNGASS) report 2010, Thailand had an estimated TB/HIV prevalence of 142/100,000 in 2009.

Owing to the fact that most pediatric TB cases are not smear-positive, pediatric TB is not greatly prioritized within Thailand's national TB program. Nonetheless, finding and treating pediatric TB infection and disease is clearly relevant, with the potential to provide long-term benefits in preventing future cases and disease reactivation.

Though TB prevalence in children may be as high as 27%, HIV testing among pediatric TB cases is not recommended in Thailand's national TB/HIV guidelines. TB screening in HIV-infected children is recommended for first visit and before ART initiation, but there is no standard for frequency of TB screening in this population.

In this context, clinics implementing HQ-Thailand recognize the significance of improvement activities focused on TB screening for pediatric HIV patients, and have implemented a variety of improvement activities aimed at addressing this critical area of care.

At Sawanpracharak Hospital, Surin Hospital and Lampang Hospital, the proportion of HIV-infected children who were screened for history of TB contact and TB signs and symptoms at least once in the last 6 months demonstrated remarkable improvement in performance rates due to improvement activities (Figure 2).

At Sawanpracharak Hospital, located in central Thailand, staff initiated meetings with the dedicated QI team to **review areas for improvement**. To improve documentation, they developed a **medical form for TB screening** and integrated it into the existing clinical record form.

Continued on page 3

HEALTHQUAL is supported through the US Department of Health and Human Services, Health Resources and Services Administration as the International Quality Center for PEPFAR.

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An Update from HQ-Namibia: TB Screening and Isoniazid Preventive Therapy

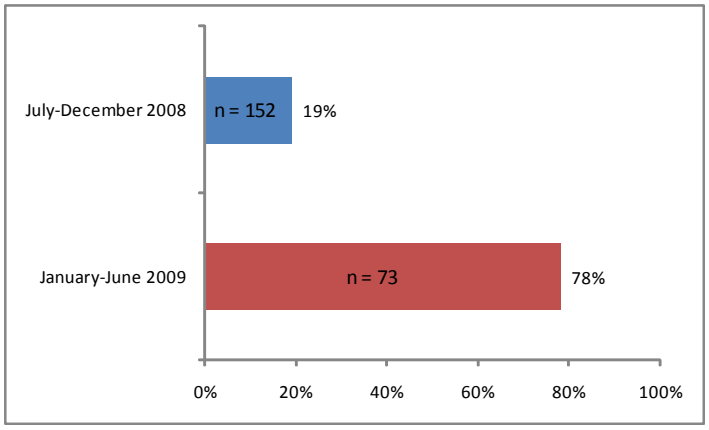
Keetmanshoop Hospital, located in the Karas region, southern Namibia, is staffed by one physician, two nurses, one pharmacist, one data clerk, and four community counselors. By the end of June 2009, the hospital's HIV care program recorded a total of 1988 patients; 1874 adults and 114 children. In that same time period, the hospital counted 1183 patients enrolled in ART: 1094 adults and 89 children. The hospital's HIV clinic operates 8:00AM to 5:00PM, Monday to Friday, with personnel on-call to address prevention of mother to child transmission (PMTCT) of HIV and post-exposure prophylaxis after hours, weekends and holidays.

QI Activities focused on:

- **Improved documentation and screening**
- **Developing routine screening questions**
- **Creating IPT identification cards**
- **Staff training**
- **Systematic documentation**

Staff received baseline data, third assessment from July-December 2008, which revealed that only 19% of eligible patients were receiving isoniazid preventive therapy (IPT). Namibia's national guidelines call for IPT in the absence of active TB disease. After careful consideration, staff initiated QI activities to address this measure of care and began incorporating several key activities into their QI plan. To facilitate a more consistent and **systematic documentation and screening process**, staff developed and implemented **screening questions** based on a TB policy manual to be accompanied by use of **IPT identification cards** to identify screened patients. Next, the team instituted specialized **training for nurses and community counselors** on screening and use of tools. A dedicated **staff member was assigned to TB examination, investigations, and final decision-making on IPT administration** to maintain consistency in screening protocol. TB staff was tasked with ensuring **routine documentation** of screening and/ or IPT in patient records, and oversight was established to reinforce data capture and provision to the data clerk.

Figure 1: % of eligible patients prescribed IPT (two rounds)



Source: Keetmanshoop Hospital

At fourth assessment (January-June 2009), the number of eligible patients prescribed IPT increased by 59% within six months (from 19% at baseline to 78% at follow-up) (Figure 1). Keetmanshoop staff learned several valuable lessons from their QI activities. Not only were nurses and community counselors empowered to play a participatory role in TB IPT and associated QI activities, but they also learned that small steps facilitate positive improvement in patient care.

In addition, the improvement team strengthened communication between facility staff across departments, reinforced collaboration in patient care, and stimulated innovation in the use of existing tools to solve problems.

Through their work on this critical QI activity, staff developed a list of challenges, recommendations and lessons learned to guide future improvements in TB care. Foremost, staff now understands that TB is different from many other common respiratory and non-infectious diseases. They are also aware of complications associated with TB in people living with HIV, and the uniquely complex health concerns in PLWHA which may lead to delays or ineligibility for IPT. Keetmanshoop is now guided by an understanding that continuous training in TB is essential, particularly given high staff turnover rates. They recognize the need for further scholarship on this issue, and hope to use HIVQUAL performance results to stimulate future action.

An Update from HEALTHQUAL Guyana: Quality Improvement in TST Screening

At Dorothy Bailey Health Centre in Guyana's capital, Georgetown, a seven member team used baseline data (43%) to drive performance improvement for the Tuberculosis skin testing - TST screening - measure.

The team began by constructing a fishbone diagram (pictured) as a tool of process analysis to identify specific structures and processes on which to focus improvement efforts.

Initially, the team discovered that providers were not consistently ordering TST, evidently making it very difficult to accu-

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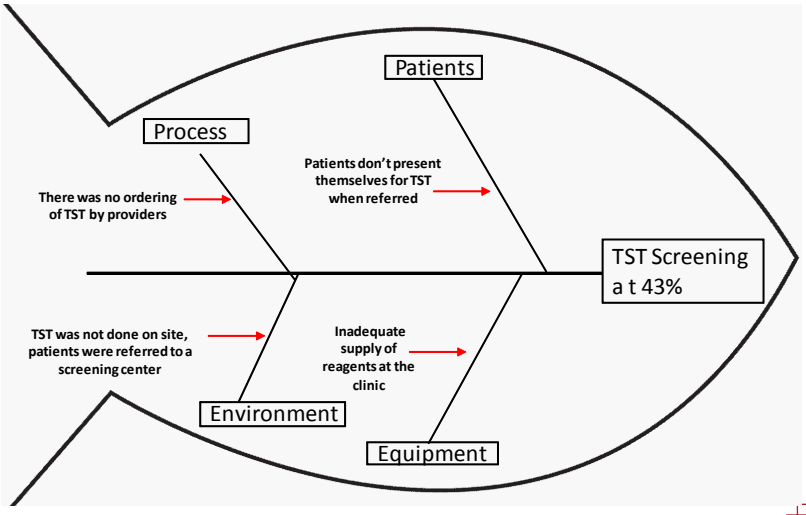
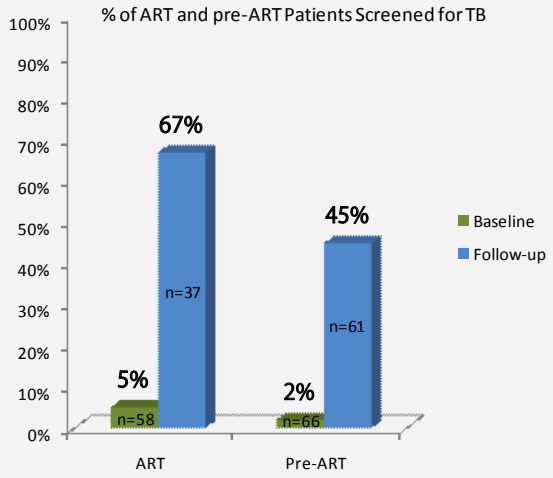


HQ-Mozambique continued from page 1

In response to these obstacles, the team initiated a number of targeted interventions. First, they focused on timely **availability of the TB screening forms** and **inclusion of the forms in all HIV+ patients' charts**. To reinforce screening, a **TB screening review course** was initiated for all clinicians tasked with screening HIV patients. A general need for greater attention to TB screening was addressed by acknowledging this problem and motivating staff to focus on improvements in this area of care. For example, **regular monthly meetings** were instituted to perform chart review for all HIV patients, reinforcing the need to screen and highlighting the processes involved.



Source: Ulongue Rural Hospital, 2010

Hospital staff **established a dedicated discussion period** during quality committee meetings to focus on the TB screening indicator and to review programmatic performance and progress.

Finally, staff agreed to focus on **strengthening the collaboration** between the HIV/AIDS and TB departments, with an agreement between HIV and TB department heads to share data and initiate referrals for patients screened in each respective department on a quarterly basis.

As a result of these activities, performance rates for TB screening in both ART and pre-ART patients improved by 62% (from 5% to 67%) and 43% (2% to 45%), respectively.

*MSF-Belgium is an implementing partner at Ulongue Rural Hospital

HQ-Thailand continued from page 1

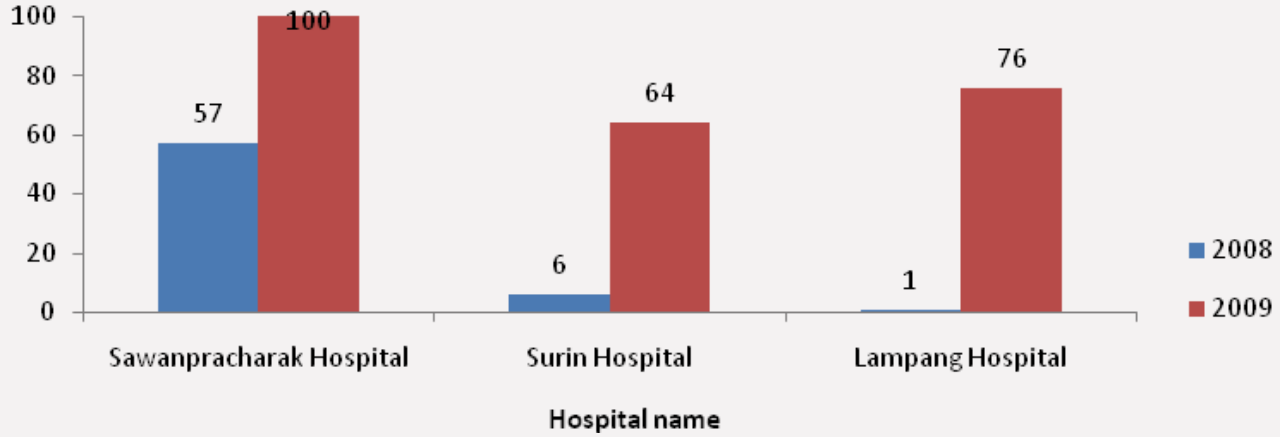
To involve all staff in QI and improve efficiency, responsibility for TB **screening** was assigned to nurses, HIV patients, and the health officer to screen history and clinical TB **before clinical visits**. The doctor would then review TB screening charts, take physical exams and record TB contact history. Patients identified with history of TB contact or symptoms were then treated according to standard treatment guidelines. Performance rates for TB screening improved by 43% (from 57% at baseline to 100% at follow-up).

Surin Hospital, located in northeastern Thailand, is a 697-bed facility with approximately 156 pediatric HIV cases. Initially, staff introduced a **stamp to all patient cards which included the pediatric HIV/TB screening questions.** This strategy served both as a reminder to conduct screening and a strategy to ensure consistency throughout this process. To reinforce identification of cases, the team implemented a **TB protocol** to screen chest x-rays and PPD in all patients from April to June of each year. Patients with clinical TB or history of TB contact were managed according to standard treatment guidelines. Performance rates improved by 58% (from 6% at baseline to 64% at follow-up).

Lampang Hospital is an 800-bed facility located in the upper north region. To improve institutional organization and preparation, Lampang hospital staff initiated a pre-clinic conference to review patient cards for all children scheduled to visit the HIV clinic the following day. Much like the approach at Surin Hospital, staff introduced a stamp on patient cards with pediatric HIV/TB screening questions. To bolster documentation and appropriate follow-up, staff emphasized recording of history of TB contact for each patient at each clinical visit. Patients with clinical TB or history of TB contact were managed according to standard treatment guidelines. Performance rates improved by 75% (from 1% at baseline to 76% at follow-up).

Please see page 4 for photos from HIVQUAL-T.

Figure 2: Proportion of HIV-infected children who were screened for history of TB contact and TB signs and symptoms at least once during the last 6 months of the review period (2008-2009)



Source: HIVQUAL-Thailand

HQ-Guyana continued from page 2

rately measure this area of care. In addition, without regular testing, appropriate referrals for further testing or treatment could not be conducted. This barrier consequently led to high rates of patients lost to follow-up.

Finally, the team determined that an inadequate supply of reagents to complete the test played a critical role in overall performance issues with TST screening.

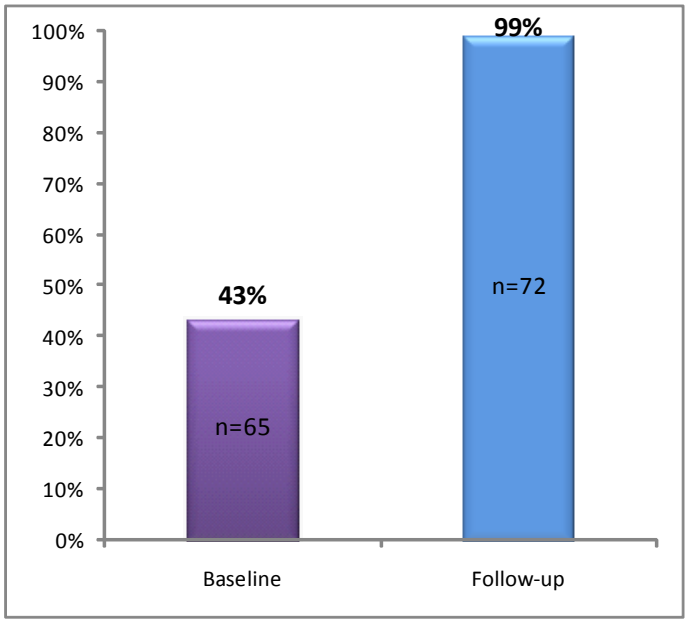
In response to their findings, the team first presented their analysis to providers at Dorothy Bailey Health Centre. A nurse lead was then tasked with coordinating with all rotating nurses to remind physicians to **screen all eligible patients**. This effort was reinforced by the implementation of **regular staff education** sessions.

To supplement this process, three data clerks were asked to identify eligible patients and inform support staff when they are scheduled for appointments so they can be screened.

This intervention was monitored every three months to evaluate impact.

Performance for the TST screening measure increased by 56% (from a baseline of 43% to 99% at follow-up).

% of Patients Screened for TB using Tuberculosis Skin Testing (TST)



Source: Dorothy Bailey, 2010

Team meeting to review pediatric HIVQUAL-T performance data and organization infrastructure assessment at Surin Hospital

Pediatric HIV care team from Sawanpracha-rak Hospital and community hospitals in Nakornsawan province and a Nakornsawan provincial health officer visited Chiang Rai regional hospital to learn about pediatric HIVQUAL activities and the pediatric HIV care model.

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2011 All Counry Learning Network
March 14-18 - Windhoek, Namibia

The ACLN brings together delegations from each HEALTHQUAL implementing country, including Ministry of Health and CDC staff, driven by peer learning strategies to build and reinforce sustainable quality management programs.

BRIEF

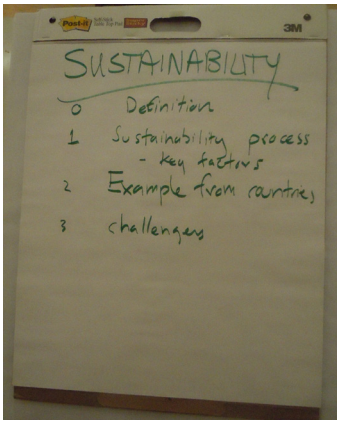
VOLUME II, ISSUE I

MAY 2011

In this issue:

Participants from 15 countries spanning 4 continents including Africa, Asia, South America, North America and the Caribbean converged in Windhoek, Namibia for the second All Country Learning Network, sponsored by HEALTHQUAL International and graciously hosted by the Namibia Ministry of Health and Social Services. Participation spanned Ministries of Health, CDC country offices, and US government partners.

The ACLN was officially opened by the Deputy Minister of Health, the Honorable Petrina Haingura, accompanied by the US Ambassador to Namibia, Wanda Nesbitt; Mrs. Ella Shihepo, Director of Special Programs, Namibia MoHSS; Dr Ahaczie Lawson, WHO Epidemiologist; Sue Gerber, Deputy Country Director, CDC-Namibia; and Dr. Bruce Agins, Director, HEALTHQUAL International.



Aligned with the goals of PEPFAR II, the ACLN focused on the theme of results and sustainability across national quality management (QM) programs. The agenda reflected strategies and obstacles confronted in each country toward building government-level capacity for local and national improvement programs.

Much like the 2010 ACLN in Johannesburg, the program included a mix of country presentations, plenary presentations, open space sessions, and targeted workshops. An added case study exercise tasked multi-country groups to consider a specific improvement topic and brainstorm processes and techniques to address that particular issue or area of concern.

Two QI storyboard awards were presented at the ACLN, Outstanding Achievement in QI, voted by a panel of expert judges and the People's Choice Award, voted by participants. The award winners, Namibia and Haiti, can be found on pages 2 and 3 respectively. The QI storyboard was driven by criteria ranging from adherence to QI principles, team approach, and sustainability, to creativity, consumer involvement and impact on patient outcomes.

Plenary presentations addressed a range of topics tailored to spreading current knowledge on QI and/or HIV to promote strategies, expertise, and successes and challenges across country programs. These included: sustainability of QM programs; prevention for people living with HIV; recent developments and updated guidelines on TB and TB/HIV; a pilot program based on the UNICEF Mother Baby Pack to prevent mother to child transmission of HIV in Kenya; Measuring for Improvement: QI and retention in care; What are factors of sustainability on the National HIVQUAL program in Thailand; and HIVQUAL, the Haitian model for sustainability of their national quality management program.

To broaden and advance peer learning opportunities, each country presented one unique or specific component of their national program. These topics reflected local adaptation of HEALTHQUAL to build integrated, national QM programs. Topics included:

Botswana: The use of e-registers for quality improvement
Ethiopia: QI in hospitals
Guyana: Maternal child health integration into HEALTHQUAL
Kenya: Challenges in implementing a national QM program
Mozambique: Integration of QI into health sector
Namibia: Regional groups, peer learning and QI
Nigeria: Capacity building for the QM program
Swaziland: Integration of QI and QA programs
Uganda: QI Institutionalization

Open Space sessions, characterized by a participant-driven and self-organizing model for group learning, spanned an impressive range of issues relevant to reinforcing sustainable government led quality management programs. Some examples of Open Space session topics included: sustaining QI in resource limited settings, integration of QI/QA, consumer involvement, health care financing, human resources for health, QI in hospitals and validating QI, among others.

Morning workshops launched the daily program, reinforcing improvement methodology through topics such as consumer involvement strategies in national QM programs, facilitation skills, QI 101, and a fresh look at QI.

HEALTHQUAL would like to thank the Namibia Ministry of Health and Social Services for their unwavering support and partnership in making the ACLN a recognized success.

Namibia - Winner of Outstanding Achievement in QI

- 2011 ACLN Storyboard Competition -

A QI Team Approach to Scale Up Provision of TB Isoniazid Preventive Therapy (IPT) at Outapi ART Clinic

A routine review of performance data by the Outapi provider team revealed that of the 11 quality indicators regularly monitored by the QM program, the IPT performance rate was 22% - the lowest in that review period.

Outapi clinic staff determined to improve the provision of TB IPT to eligible patients from 22% to at least 50% within 6 months. To accomplish this goal, a QI project team was established to coordinate improvement activities. The team included a medical officer who also served as the team lead, a registered nurse tasked as the project secretary, a sister-in-charge, a pharmacist, data clerk, community counselor and an expert patient.

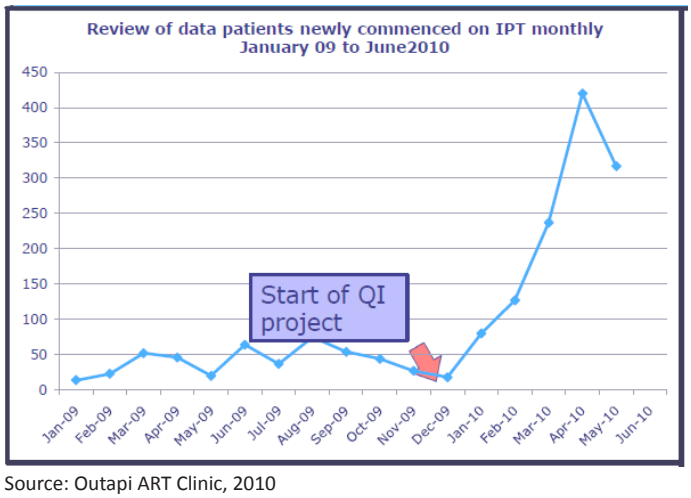
To systematically address TB IPT performance, the team investigated the current process to inform implementation of potential strategies. Data from the previous six month review period was analyzed, including data from all previous quality indicator performance scores.

In addition to reviewing the data, staff conducted process analysis using a fishbone and evaluated qualitative data from a previously completed focus group discussion addressing client views on IPT.

After careful review and analysis, the team considered potential interventions and parallel rationale for implementation:

- A doctor gave a presentation to reinforce screening for IPT eligibility and prescribing practices for all clinic nurses
- A screening tool for TB was placed in all consulting rooms to increase likelihood of its use
- A screening tool for IPT was availed to all providers to boost identification of eligible patients
- The data clerk gave a presentation on documentation in the patient's file to improve this critical practice
- The expert patient provided intensified health education to patients on IPT and TB to clear myths and misconceptions on IPT identified during the focus group discussions

With the selected interventions established, the team set out to implement proposed tests of change. Interventions were initiated over one month between January 15 to February 15, 2010, for patients registering with the ARV clinic.



Source: Outapi ART Clinic, 2010

Data was collected during the one month intervention period to monitor the number of patients:

- eligible for IPT
- eligible for IPT started on IPT during the intervention period
- from previous cohort who returned for IPT refills
- from previous cohort who failed to return for refills
- stopped by providers owing to side effects
- cumulative number of patients on IPT at the clinic

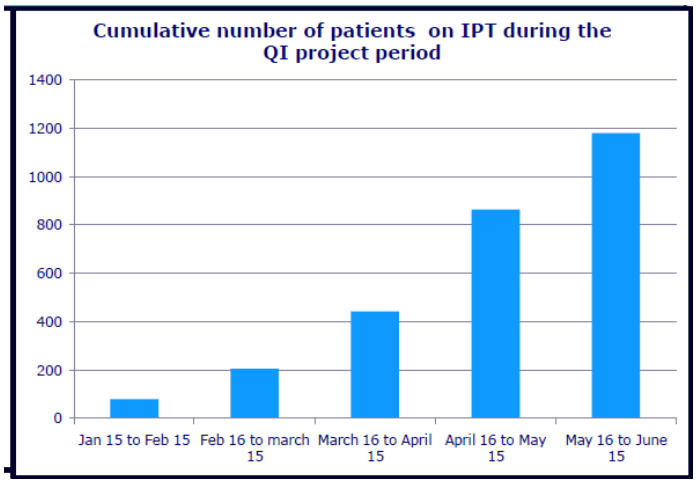
Use of Data to Study Results

- 94 patients were newly registered for HIV care between Jan 15 and Feb 15, 2010
- 80 patients were started on IPT in that period
- This translated to a performance of 85%
- From Feb 15, 2010 IPT was offered to all eligible pre-HAART patients by all the nurses
- Given the success of the pilot phase, the project was further expanded to include patients on HAART from March 15, 2010

Impact
The cumulative number of patients started on IPT from the period of Jan/Feb to May/ June increased dramatically, from 80 to 1181 patients.

Future Plans:

- A red sticker was placed on passports of patients on IPT for ease of identification and <u>follow up on adherence and to monitor completion rates</u>
- During health education patients were shown samples of IPT and CPT for differentiation
- Staff were encouraged to record in the patient file if IPT had previously be taken (e.g. IPT 2006)
- The pharmacist on the QI team will continue updating the team regularly on IPT progress during staff meetings



Source: Outapi ART Clinic, 2010

- Winner of the 2011 ACLN People's Choice Award -

- 2011 ACLN Storyboard Competition -

Grace Children's Hospital (GCH), HAITI

Founded in 1967, Grace Children's Hospital is located in Western Haiti, just outside the capital, Port-au-Prince. The hospital serves a patient population of approximately 67,489 people; 4,512 are HIV+, of which 1590 are on HAART.

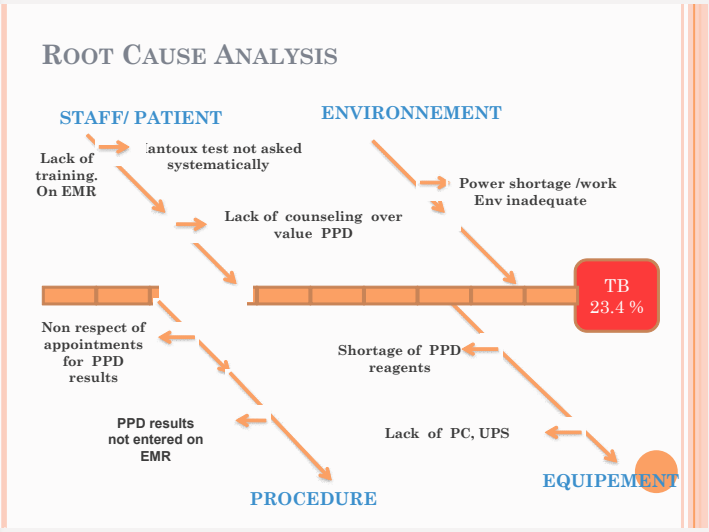
GCH chose TB screening as the focus of their improvement project for several reasons: TB is the most common opportunistic infection and endemic in Haiti, national guidelines recommend a PPD test for all new HIV patients, and GCH has a history as a center of excellence in TB management.

Further, the hospital's performance data indicated that only 23.4% of 375 patients had received TB screening as per national guidelines.

The TB QI project team included a team leader, a facilitator, a time keeper, a record keeper, and three additional team members comprised of a sputum analysis technician, a psychologist and a lab technician. Despite working under difficult circumstances due to the devastating earthquake earlier that year, the team nonetheless set an ambitious improvement goal to increase the TB screening rate from 23.4% to 60% from June to December.

The Team Approach

During their first meeting, the TB improvement team reviewed GCH HIVQUAL data reports from previous data collection periods, and conducted a root cause analysis using the "fishbone" exercise pictured here.



Through their process analysis, the TB team derived informative insight to guide improvement strategies. They learned that PPD was previously not conducted systematically for all new patients without active TB; patients lacked information about the purpose and importance of PPD testing; and PPD results were not systematically entered into the EMR.

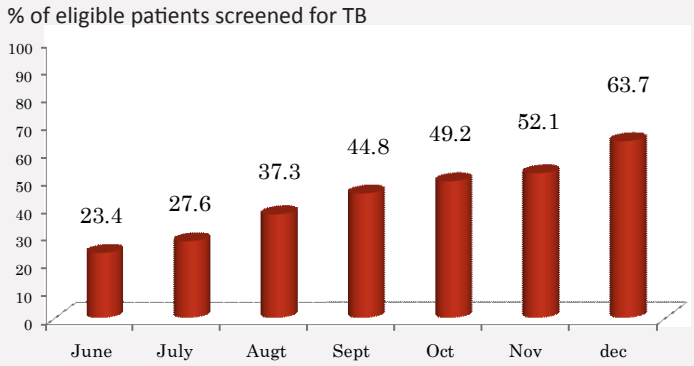
Based on these findings, the team developed several strategies to address performance in TB screening. Each strategy involved a Plan-Do-Study-Act (PDSA) cycle to test small changes toward further improvement. Three primary strategies emerged: A) **systematic PPD testing for all new patients**; B) **reinforcing patient counseling and education about the importance of PPD testing**; and C) **use of the PPD register to systematically update results in the electronic medical record (EMR)**. Each of these activities was measured against baseline data and compared to follow-up measures to guide further strategies and QI activities.

GCH staff met and exceeded their stated goals, achieving a 40.3% increase in performance on TB screening from June to December, improving from baseline - 23.4% to follow-up - 63.7%

This improvement project demonstrates the importance of team work, persistence to achieve high quality patient care on a daily basis, and improvement of provider/patient relationships which can have a significance impact on patient attitudes regarding treatment.

In their efforts to sustain a quality program, GCH staff recognize additional challenges, including a shortage of PPD tests, frequent power outages, and unexpected political and economic barriers that impact patients appointments.

Pressing ahead, GCH staff plan to reinforce quality by motivating staff to embrace an improvement approach in daily activities, routinely apply national guidelines for TB, and ensure results are entered into the EMR so that performance data can be continuously monitored and utilized to inform future improvement.



Source: Grace Children's Hospital, 2011

HEALTHQUAL is supported through the US Department of Health and Human Services, HRSA as the International Quality Center for PEPFAR.

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CAN WE CONDUCT QI in
HIV Prevention Program;
STI
Sustaining QI
TOOLS TO PROMOTE ADHERENCE IN CHILDREN
DR WITAYA
Prevention Indicators for HEALTHQUAL
Dan Kidder
1 hour
OPEN SPACE
Country Presentation
Lunch
Open Space
Rooms: Kuaene, Ruacana, Namib
Concurrent data managers' workshop
report back
displayed

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BRIEF

VOLUME II, ISSUE II

ACLN Story Board Entries, continued coverage

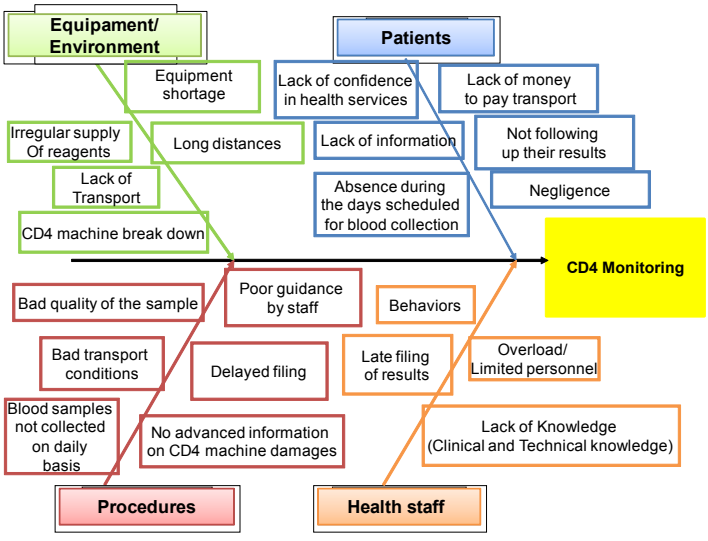
- Mozambique -
CD4 Monitoring at Ressano Garcia Health Center

Ressano Garcia is located in the Maputo Province of southern Mozambique, bordering South Africa; the district has a population of 9,837 and an HIV prevalence of 19%. The health center began providing ART in 2006, and currently provides care and treatment to 2,160 people living with HIV. As Ressano Garcia has significantly expanded access to treatment, performance data from 2009 revealed several areas for improvement.

A multidisciplinary ART committee convened to discuss performance data and determine improvement priorities. All indicators were considered, and the team chose to focus on CD4 monitoring.

The committee began by analyzing CD4 performance and evaluated obstacles to improvement. Their process analysis is pictured in the fishbone diagram below, revealing multiple factors impacting performance in this critical area of care.

The committee determined to develop and implement a range of targeted tests of change. Issues associated with performance were systematically listed and aligned with potential improvement strategies. Each strategy was then tested, with subsequent system changes considered for wider implementation focusing on sustainability.

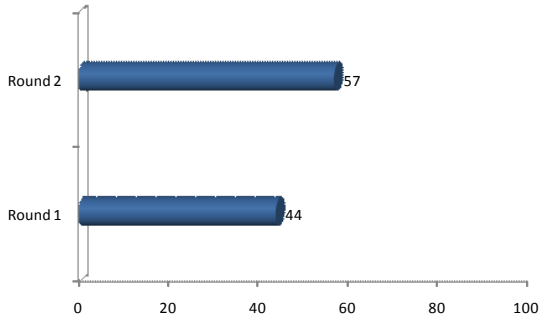


Additional technical assistance at Ressano Garcia is provided by EGPAF

For example, a lack of clinical and technical knowledge among staff was met with **refresher courses on ART and clinical mentoring**, while patient education was added to strengthen communication between staff and patients. **Regular staff meetings** were instituted both to reinforce protocol and the **importance of documentation**, and to improve internal facility-level communication **between the clinical director, staff and CD4 technicians**. Clinic staff worked with patients to emphasize appointment keeping by stressing the **value of CD4 monitoring**. In addition, local confidence in overall health service quality was addressed through monthly **meetings with community leaders**. Finally, documentation issues were managed by **reinforcing filing of test results** in patient charts immediately following receipt of CD4 lab results.

The number of eligible patients with a CD4 measure increased by 13% - from a baseline of 44% to 57% at follow-up.

% of eligible patients with CD4 screen



Source: Ressano Garcia, 2010

To promote sustainability in institutional improvement, Ressano Garcia's QI team identified a series of follow-up steps. They plan to continue **working with the receptionist** to ensure that CD4 results are **promptly filed in patient charts**; will prominently **display a CD4 flow chart** in all clinic areas - reception, lab, consult rooms - and conduct **weekly education for patients** on the importance of CD4 monitoring; implement regular **rapid assessment of patient files** to **ensure follow-up** according to national guidelines; maintain frequent **contact with the CD4 lab** to ensure timely access to all inputs, including the machine, reagents, and transport for patients to the facility; and **monitor performance on a quarterly basis** to determine if improvement is sustained.

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Uganda

The AIDS Support Organization (TASO) Jinja: Improving Patient Wait Time

TASO Jinja is located in the Jinja District of Eastern Uganda near Lake Victoria. The center serves a catchment area of approximately 1.5 million people in five districts including Jinja, Kamuli, Iganga, Mayuge, and parts of Mukono.

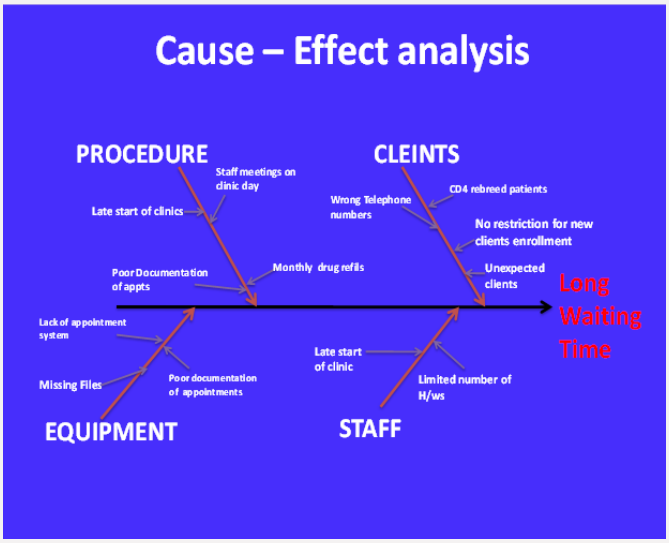
The center was launched in 1991 as part of a local initiative by members of the Jinja community in response to the growing HIV/AIDS epidemic.

Performance Analysis
The QI team analyzed performance using a fishbone diagram, and identified major factors impacting patient wait time, including:

- Appointment documentation issues
- Delayed clinic opening times
- Missing patient files
- Lack of an appointment system
- Limited staff and no restrictions on patient enrollment

Interventions
The Jinja clinic initiated a number of activities to improve/ reduce patient wait time for HIV services, and reinforce clinic efficiency.

Staff Hiring
An analysis of the patient-provider ratio per clinic day pointed to the need to hire more staff, and action is underway to meet the clinic's staffing needs.



Appointment system
An electronic and manual diary system was introduced to capture and organize patient appointments. The list is used to prepare client charts by provider and identify clients who missed appointments.

Client Appointment Cards
Confusion about appointment dates led to a high number of unscheduled visits and longer wait times. A staff brainstorming session revealed that a majority of clients were not adhering to appointment dates written in their scheduling books. As a result, an easy to use calendar card was developed to ensure better adherence to appointments.

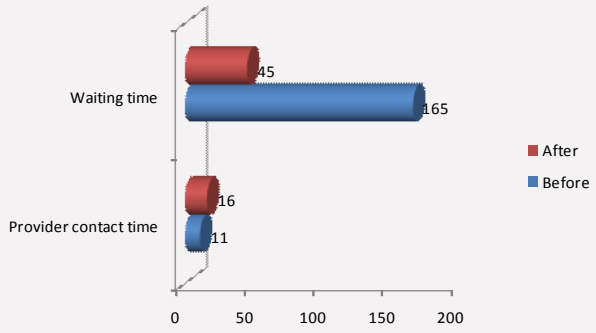
The **introduction of a Triage System to improve client flow** allowed care providers to assess and direct clients accordingly before seeking services. It was observed that 65% of visits required only medicine refills, reducing clinical interaction and improving wait time.

Community Drug Distribution Points (CDDPs) were implemented to improve drug availability for clients unable to travel to TASO centers for prescription refills.

A **Hot and Warm Line** toll free phone service was developed to assist patients with both urgent and less urgent medical issues. For example, the hotline number could be called for an ambulance, whereas the warm line could be used to plan a home visit or make an appointment.

Results
Average total wait time was reduced by 2 hours, from 165 minutes to 45 minutes, per visit. Valuable client contact time with a service provider increased by 5 minutes, from 11 minutes to 16 minutes.

Average Time in Minutes



Source: TASO Jinja, 2011

This QI project paralleled improvements in clinical indicators as well.

- ART access: +2%
- CTX prescribing: +2%
- Continuity of care: +13%
- CD4 monitoring: +7%

Lessons
Efforts to reduce wait time were associated with other positive gains, including increased patient-provider contact time and improved clinical assessment of clients using WHO clinical staging and improved immunological monitoring.

Sustainability
All interventions have been expanded and formally incorporated into routine clinical activities. Further, the QI committee continues to oversee QI efforts at a variety of levels through routine QI updates during weekly meetings, regular monthly team meetings to assess clinic level QI progress, and use of planning tools to maintain a high level of documentation on active patients.

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- A Public Health Approach to Quality Management -

In this issue:

Dr. Siriwat Tiptaradol, Deputy Permanent Secretary, MoPH, Thailand

October 2011

Youth Self-Advocacy: An Interactive Dialogue between HIV Positive Youth in the U.S. and Swaziland

August 3, 2011 – New York City – Via live video conference linking Mbabane, Swaziland and New York City, HIV+ youth from both countries engaged in an exchange about their experiences living with and growing up with HIV. The dialogue focused on strengthening understanding between youth in both countries around issues of HIV treatment, care and empowerment among their peers and within their communities.

YACAC member, Jahlove Serrano, reads questions to Swazi youth

Members of the AIDS Institute's Young Adult Consumer Advisory Committee (YACAC) shared personal triumphs and struggles of growing up with HIV, battling discrimination and stigma, experiences with taking antiretroviral medications, and their accomplishments in becoming youth advocates to promote education and tolerance about HIV/AIDS among adolescents and young adults. In Swaziland, youth are now beginning to formally coordinate youth-focused HIV activities and similarly share their stories. The virtual meeting served as inspiration for a more open and empowered future, highlighting ways in which youth in the US are engaged in formulating HIV/AIDS policy in awareness, prevention, and treatment in their communities. The virtual forum was a dynamic opportunity for cross-country dialogue and the sharing of stories that while varied, share many parallels.

The video link was sponsored by the US Department of State, US Embassy in Swaziland, the NYSDOH AIDS Institute's YACAC, and the Baylor Clinic Teen Club in Swaziland.

The two groups plan to press ahead with continued sharing of their experiences, successes and challenges, and hope to meet again soon either virtually or in person.

Thailand Celebrates Quality Improvement: 3rd National HIVQUAL-T Forum

The 3rd annual national HIVQUAL-T Forum was held over two days, August 8-9, 2011 in Bangkok, Thailand to share lessons learned in implementing a sustainable framework for quality management and to continue to strengthen collaboration among the national networks of HIV providers represented at the meeting.

HIVQUAL-Thailand has achieved remarkable programmatic progress since its launch in 2003, with an adult HIV improvement program implemented in 700 hospitals across 76 provinces, and a pediatric program at 200 hospitals across 30 provinces.

The forum was attended by 1,086 participants, and was host to 21 panel sessions, 9 workshops, and 24 poster presentations. Booths were operated by regional and governmental/non-governmental organizations addressing topics including: development of QI services, collaboration with local government, QI planning for mentoring networks, and treatment & care for HIV+ adolescents, among others.

Through strong leadership and successful engagement, the national HIVQUAL-T team is working toward programmatic expansion to all government hospitals, while reinforcing full integration with the national accreditation (HA) program and the strong culture of quality improvement demonstrated over the last 8 years of implementation.

HIVQUAL-T Software Workshop

CD4 Monitoring
Likoni District Hospital: Kenya

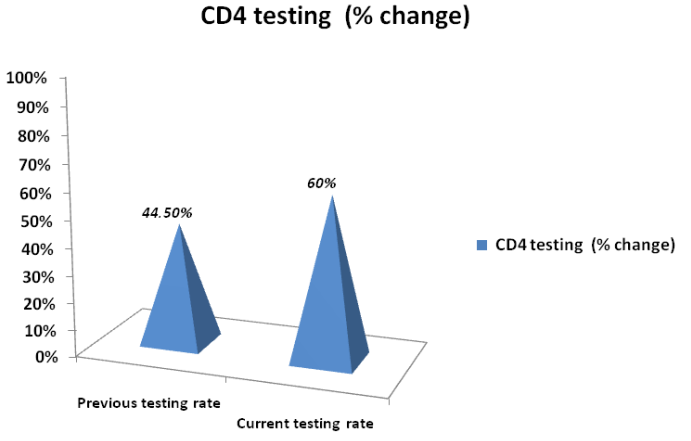
The Likoni District Hospital quality improvement team has been meeting regularly to examine CD4 testing practices in their ambulatory care setting and implement activities to improve this area of care for its HIV infected patient population. Likoni is located in south eastern Kenya near the city of Mombasa. The quality team consists of a registered clinical officer, health records and information officer, adherence counselors, a nurse, lab technologist, VCT counselor, pharmacist and mother to mother (M2M) volunteer - a support program for HIV infected mothers.

Ongoing Interventions: CD4 Testing - the team's clinical officer coordinated with hospital staff to reinforce the need for testing, and adherence counselors focused on ensuring timely receipt of lab tests and filing of results in patient charts. An increase in demand for CD4 testing prompted Likoni staff to coordinate with the lab at Lady Grigg Maternity Hospital – where lab tests are currently processed. This partnership resulted in a two-fold increase in capacity, from 20 to 40 lab tests per week.

- ***Adherence counseling*** – staff now sort patient charts in advance of clinic visits to ensure that eligible patients receive counseling.

- ***Education*** – the team nurse spearheaded clinic-level education to sensitize all hospital staff on CD4 testing, and a CD4 tracking chart (pictured) was implemented and included in patient files. The chart now serves as a visual prompt for clinicians to respond to recent test results or the need for testing to be completed.

CD4 testing has improved from 44.5% at baseline (2009) to 60% at follow-up (2011)



- ***Patient involvement*** – Likoni staff have focused improvement efforts on engaging patients and discussing the importance of CD4 testing in care and treatment.

Patients are now more knowledgeable about care and prepared to take greater control of their treatment regimens. Staff now feel that patients are better engaged in care and more adherent to treatment.

Challenges: Continued activities are needed to expand patient engagement and stress the importance of CD4 testing. Retention and appointment keeping are issues of focus, and efforts are underway to reach patients in the community through existing support groups. An additional data clerk is needed to better organize patient records and ensure proper filing of patient charts.

The Likoni quality team continues to analyze processes of care to inform additional improvement activities. These include implementation of an appointment system, recruiting M2M staff to participate in quality improvement, and increased patient education by health care workers and through peer support groups.

Actions & Way forward: The quality team is dedicated to reinforcing a systems-level approach to improvement which is both practical and cross-cutting. This includes a focus on documentation, coordination with clinicians to strengthen this process, tracking patients lost to follow-up through community health workers, and routinization of effective QI interventions.♦

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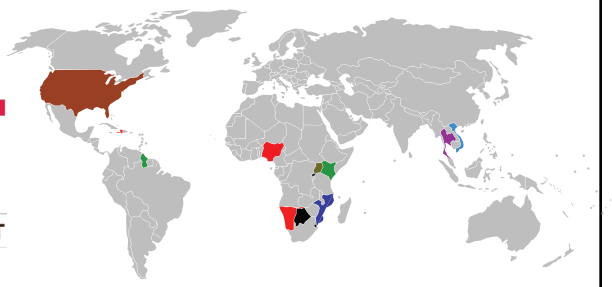
HEALTHQUAL INTERNATIONAL

A PUBLIC HEALTH APPROACH TO QUALITY MANAGEMENT



In this issue:

HIVQUAL-Haiti
Building Capacity for Sustainable Quality Improvement

Strengthening Institutional Capacity for Improvement: Access to ART Hôpital Universitaire Justinien, Haiti

Staff at Hôpital Universitaire Justinien recognized the need to improve access to ART and enrolment in the program for their 2022 active HIV patients. Prior to HIVQUAL implementation, staff demonstrated dedication to improving quality but lacked formal tools and processes to systematize their work. Staff had met sporadically to address problems only as they developed, conducted outreach for patients lost-to-follow-up, held annual workshops for program evaluation and tested small changes to reduce the gap between those eligible for treatment and those receiving ART.

Implementation of HIVQUAL-Haiti facilitated formal processes for improvement and reinforced organizational commitment to improved outcomes.

Structures and Processes: Staff developed and instituted a comprehensive *quality plan* for institutional activities; established a *quality committee* and QI project team; initiated *staff training on quality indicators* and HIVQUAL methodology; established *regular meetings* between program staff to facilitate communication between various stakeholders; and allocated new space for providers to meet and discuss patient care.

In February 2011, given low enrollment in ART (28.2%), the Quality Committee met and voted to focus on improving engagement in care. A project team was established, including a team leader (nurse), facilitator, timekeeper (field worker), data clerk (statistician), and an additional nurse.

Intervention: A review of HIVQUAL data for the review period September – February 2011 revealed that 137 of 379 eligible patients were treated with ARVs within the six month time frame. The team set a goal to increase the number of eligible patients on ARVs to 60% within six months.

The team met every week for 30-60 minutes and reviewed data monthly. Process analysis enabled staff to identify gaps in care and brainstorm strategies for improvement.

Improving acceptance of Haiti's national strategy of patient "helpers" or accompagnateurs to track patients and facilitate retention was identified as one area of focus to improving access to and enrollment

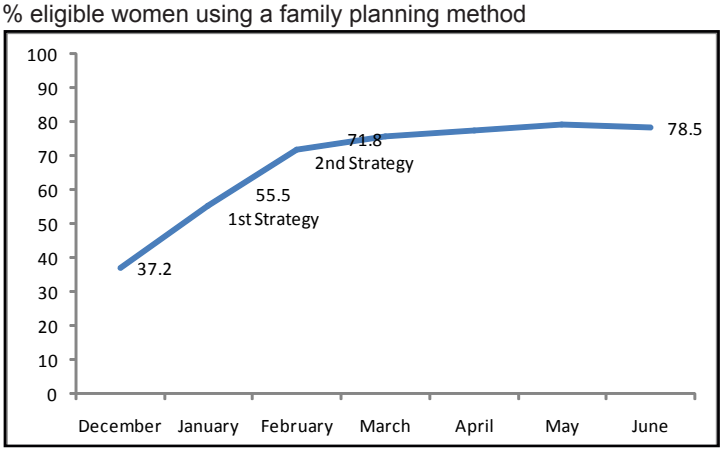
Improving Quality of Care: Family Planning Institute Fame Pereo, Haiti

Prior to implementation of HIVQUAL-Haiti, the clinic had no systematic mechanism for monitoring, analyzing and improving the quality of patient care. Review of care processes was limited to staff meetings and departmental recommendations. As part of Haiti's national quality management program, Fame Pereo's participation and implementation of HIVQUAL-Haiti has led to development of an *institutional quality committee, QI project teams* focused on specific areas of patient care and *regular staff meetings* dedicated to improvement.

Staff determined to prioritize QI project selection at the beginning of each semester during quality committee meetings, with the goals of reviewing, analyzing and discussing HIVQUAL data to develop tests of change to improve institutional HIV care.

In response to national prioritization of family planning (FP) and the small percentage of eligible women receiving a FP method at the Institute, staff considered focusing on this area of care targeting the population of HIV infected women of childbearing age.

% eligible women using a family planning method



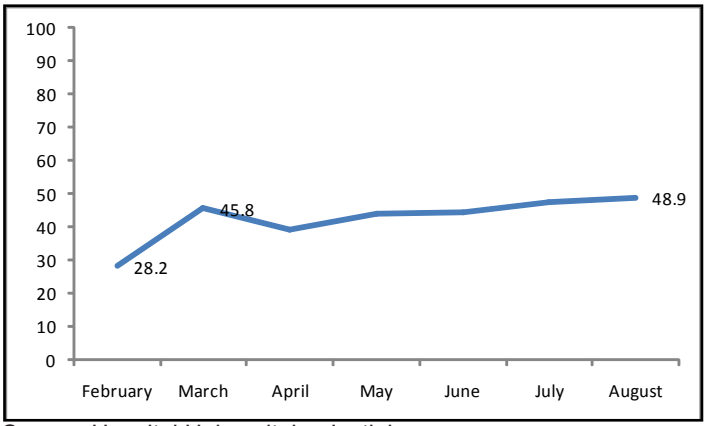
Source: Institute Fame Pereo

January 2012

in care at Justinen. Staff discovered that patients were resistant to working with accompagnatuers or experiencing difficulty in finding a satisfactory "helper." Psychosocial barriers to initiation were also identified and prioritized by the QI team.

In response, *community field workers linked with patients* to begin the process of timely ART enrollment. Through this process, they collaborated with patients to identify suitable accompagnateurs who would meet their needs and desired level of comfort throughout care and treatment.

% eligible HIV+ patients enrolled in ART



Source: Hospital Universitaire Justinien

Obstacles associated with psychosocial issues were addressed by rapid triage to see a provider during clinic visits. Additional interventions included hands-on assistance in selecting an accompagnateur, *psychological support*, and *education* on the importance of care and treatment.

To further facilitate enrollment, *patients eligible for ARV's were prioritized* in the clinic schedule to expedite access to all services, including lab tests, medical consults and transportation reimbursement for travel to and from the hospital. Advancing service delivery through prioritization reinforces Haiti's national efforts to scale-up ART for its HIV infected population.

Data entry was reinforced by formation of a data task force and appointment of a statistician to update all patient data in the EMR.

Lessons learned: An expedited response to important issues as they arise can be a key improvement strategy and mechanism to alleviate barriers to allow for more rapid access to treatment.♦

About Justinien: *Located in the Northern Department of Cap Haitien, Hôpital Universitaire Justinien is the second largest public hospital in Haiti serving a population of 300,000 locally and an additional 800,000 in the surrounding departments. In March 2005, Justinien began providing ART and currently has 2022 active HIV patients in care.*

The hospital offers an array of services including internal medicine, pediatrics, OB-GYN, surgery and emergency care. In June 2003, the site began offering voluntary counseling and testing and prevention-of-mother-to-child transmission in partnership with Gheskio.

*Special thanks to Ronald Thiersaint of CDC-Haiti for his coaching support on this project.

Objectives: To reduce rates of mother to child transmission of HIV and reduce HIV-related maternal mortality, staff established an initial objective of increasing the number of women using a family planning method from 37.2% to 50% between January and June 2011.

Team: The project was comprised of 7 members including 4 nurses, 2 field officers and a doctor.

Implementation: Staff implemented two tests of change in Plan-Do-Study-Act (PDSA) cycles. First, they considered strategies to improve *documentation of family planning* in the national electronic medical record (EMR). To accomplish this, the team compiled all written records for eligible women and compared them to patient records in the EMR. Through this process, discrepancies were reconciled. A family planning notebook was given to each provider to *track women who were adopting FP* methods, with continued weekly review and reconciliation between the notebook and EMR. Although some physicians considered the notebook burdensome, early data results demonstrated the benefits of systematically cross-checking records to ensure accuracy and consistency of institutional patient information and overall data quality.

In the follow-up PDSA cycle, staff focused efforts on *strategies to strengthen family planning counseling*. The QI team recommended and implemented *training for nurses and field staff* by a nurse midwife addressing different FP methods. *Educational counseling sessions* were held daily in the waiting room by two field workers and reinforced by illustrated posters also displayed in the waiting room demonstrating different family planning methods. A second counseling session was planned, and performed by physicians, where condoms were made available to women referred for family planning.

Through this effort, staff learned the value of offering continuous training for health personnel. After the first PDSA cycle, the number of women using a family planning method increased from 37.2% to 55.5% at follow-up, and up to 71.8% after the second PDSA cycle, with sustained improvement in subsequent data collection periods.

Implementation of improvement offered several valuable lessons to both the QI team and the Institute's staff. HIVQUAL-Haiti has grown from a pilot project into a culture of improvement within the Institute. Adoption of improvement methodology is now a central factor in building motivation, enthusiasm, and commitment among staff, and has infused a philosophy of institutional team work at Fame Pereo. An emphasis on leadership and staff involvement through team meetings has reinforced adoption of QI as a primary means to improve patient outcomes. This culture of improvement has specifically advanced data analysis, strategy formulation, and realization of changes toward project success. QI strategies developed and implemented to improve family planning have also positively impacted other areas of care.

Next steps: Staff are encouraged to apply QI tools to other care processes, regularly review data, and implement changes to continually improve performance both within the family planning service and across other indicators of care that impact patient outcomes. ♦

About Fame Pereo: The Institute Fame Pereo is located in the Haitian capital of Port-au-Prince and serves a patient population of approximately 300,000 with an average of 20,000 annual visits.

The Institute is staffed by 44 health care professionals covering a variety of service areas, including dermatology, HIV/AIDS, leprology, laboratory and pharmacy, and counseling and support.

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