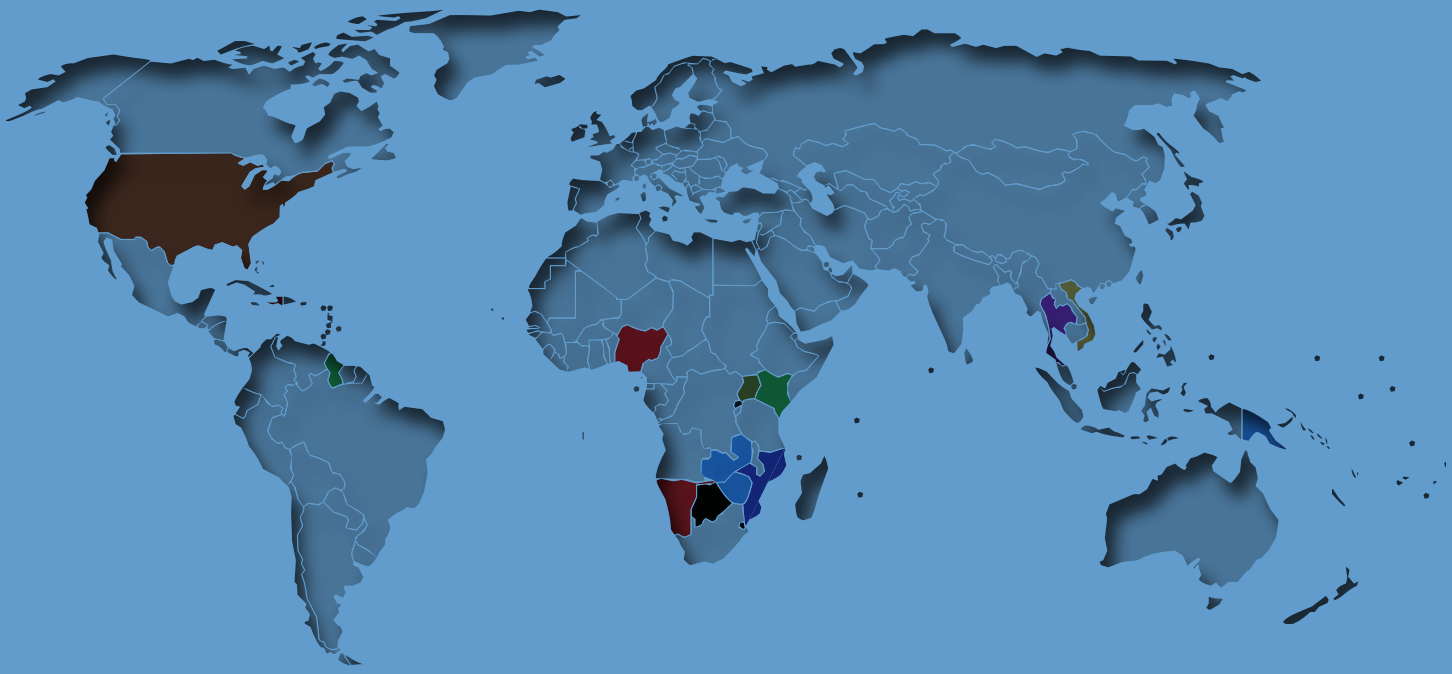
HEALTHQUAL International Update



USA	THAILAND	UGANDA	MOZAMBIQUE	HAITI NIGERIA NAMIBIA	GUYANA KENYA	BOTSWANA SWAZILAND RWANDA	VIETNAM	ZAMBIA ZIMBABWE PAPUA NEW GUINEA
1995	2003	2005	2006	2007	2008	2009	2010	2012

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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.

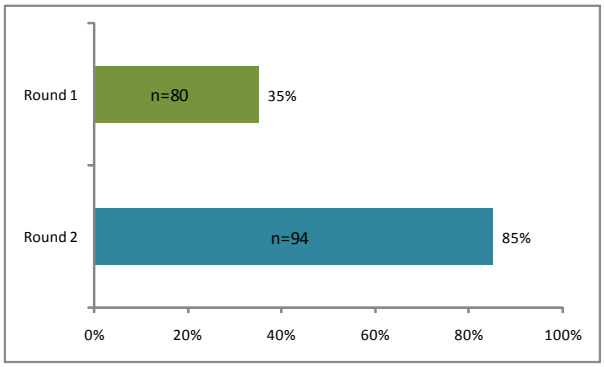
First, hospital personnel established a **designated TB staff** member to coordinate QI work. Scheduling of weekly **patient education** and **routine education of all clinic providers** reinforced **institutional knowledge** of TB, and served as a systematic means of ensuring commitment to improving 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.

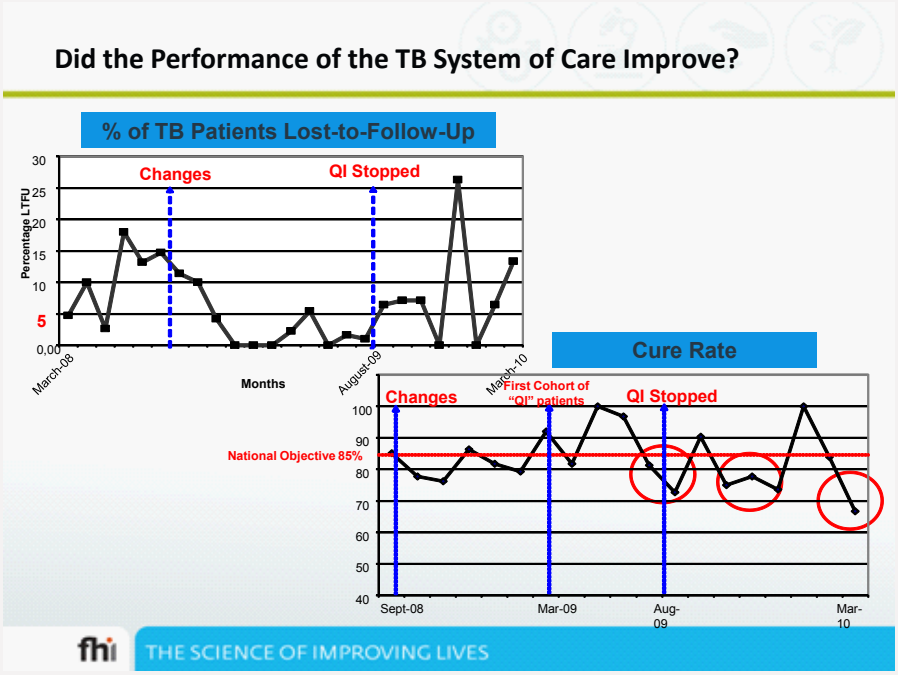
PARTNERS' CORNER: FHI-SENEGAL*

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

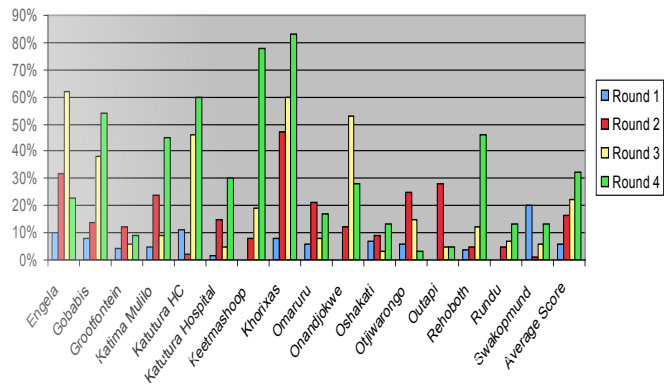
Dr. Ndapewa Hamunime, Senior Medical Officer, Namibia Ministry of Health and Social Services (MoHSS) champions the integration of the 3 I's (intensified case finding, infection control and isoniazid preventive therapy) into the national HIV treatment program. The MoHSS has embraced quality improvement (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.

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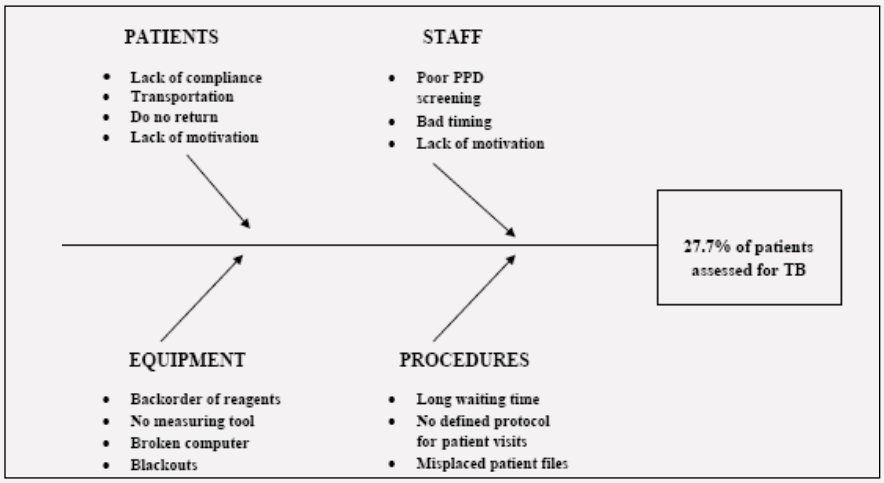
Hôpital St.-Antoine de Jérémie: Haiti

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

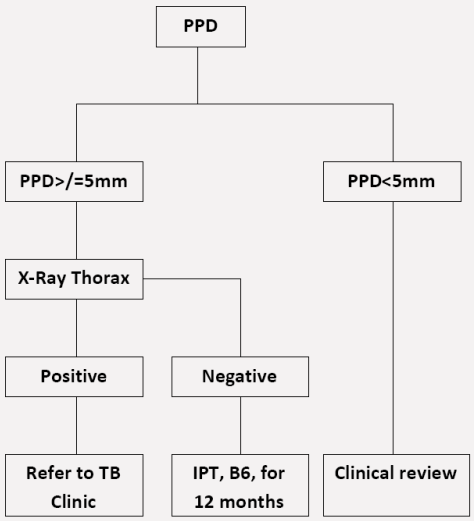
First, the team recognized the need to educate patients about TB, and set out to strengthen patient counseling to emphasize the importance of PPD skin testing for latent TB.

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

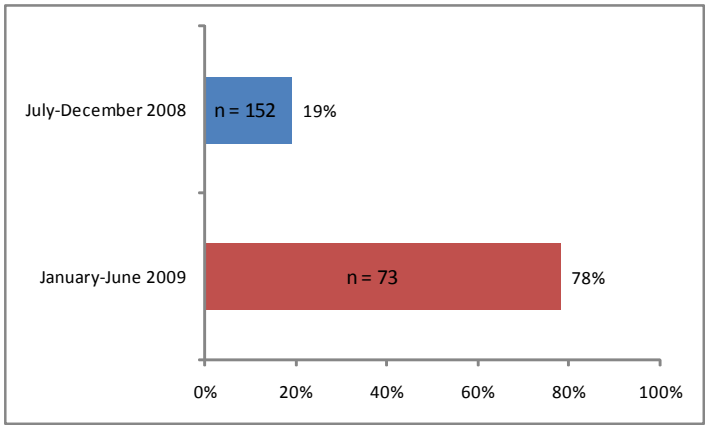
Keetmanshoop Hospital, located in the Karas region, southern Namibia, is staffed by one physician, two nurses, one pharmacist, one data clerk, and four community counselors. By the end of June 2009, the hospital's HIV care program recorded a total of 1988 patients; 1874 adults and 114 children. In that 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.

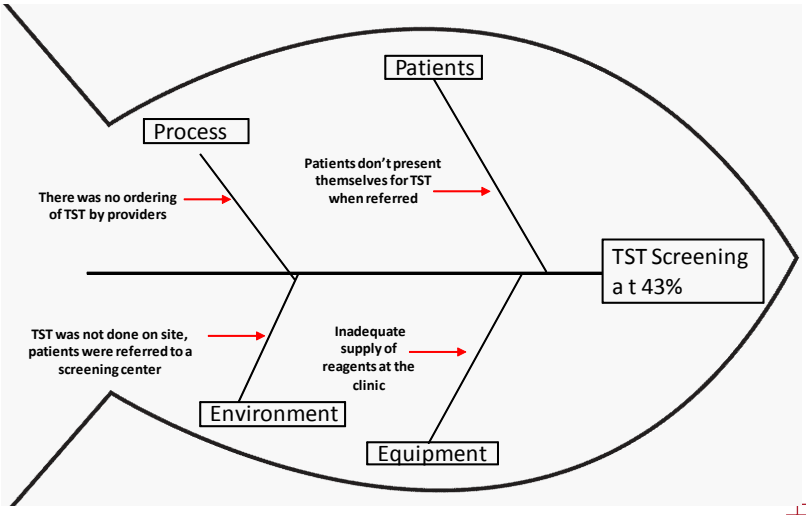
In addition, the improvement team strengthened communication between facility staff across departments, reinforced collaboration in patient care, and stimulated innovation in the use of existing tools to solve problems.

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.

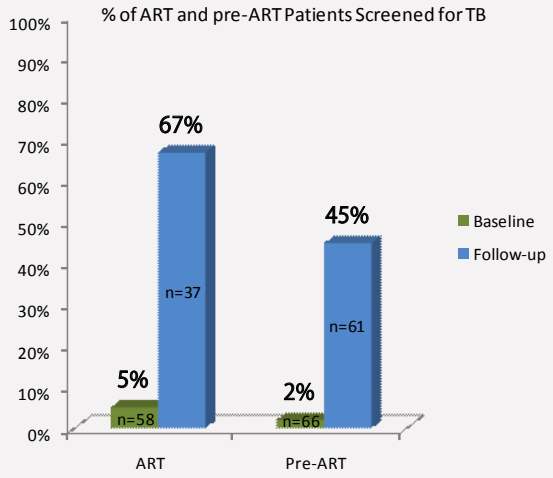


Initially, the team discovered that providers were not consistently ordering TST, evidently making it very difficult to accu-

continued on page 4

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

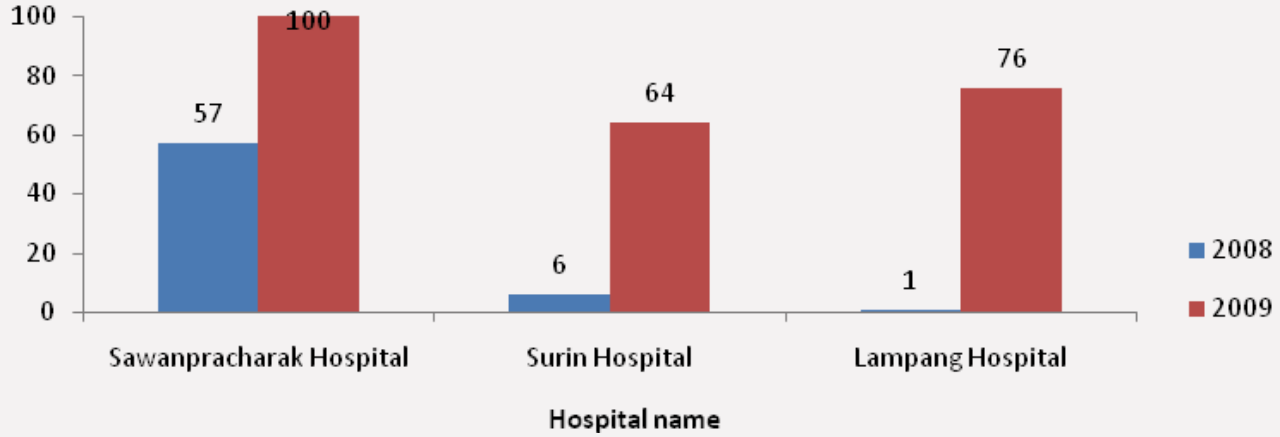
To involve all staff in QI and improve efficiency, responsibility for TB **screening** was assigned to nurses, HIV patients, and the health officer to screen history and clinical TB **before clinical visits**. The doctor would then review TB screening charts, take physical exams and record TB contact 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.

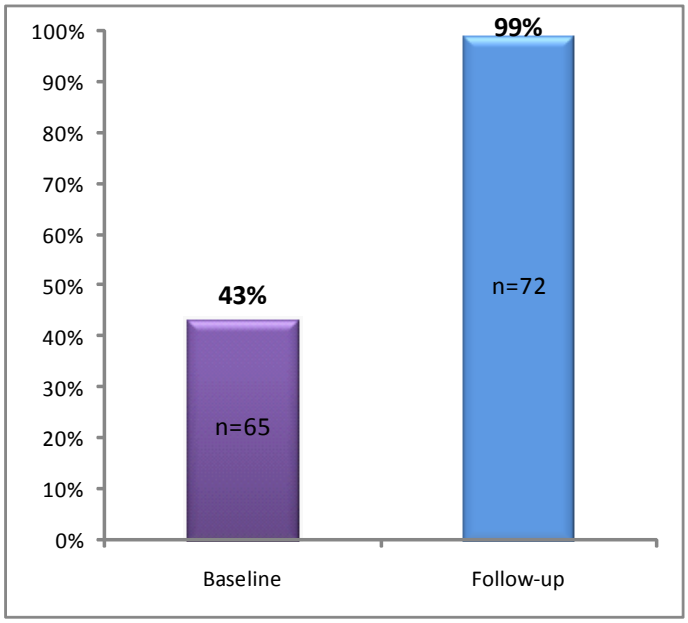
In response to their findings, the team first presented their analysis to providers at Dorothy Bailey Health Centre. A nurse lead was then tasked with coordinating with all rotating nurses to remind physicians to **screen all eligible patients**. This effort was reinforced by the implementation of **regular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



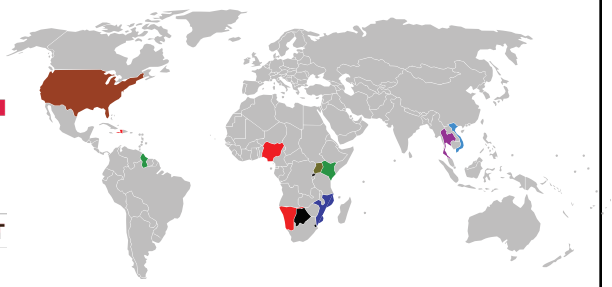
Source: Dorothy Bailey, 2010

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.

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

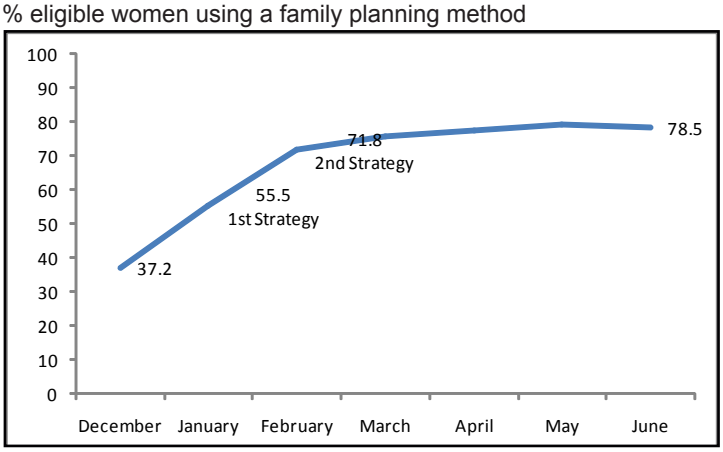
Improving Quality of Care: Family Planning Institute Fame Pereo, Haiti

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



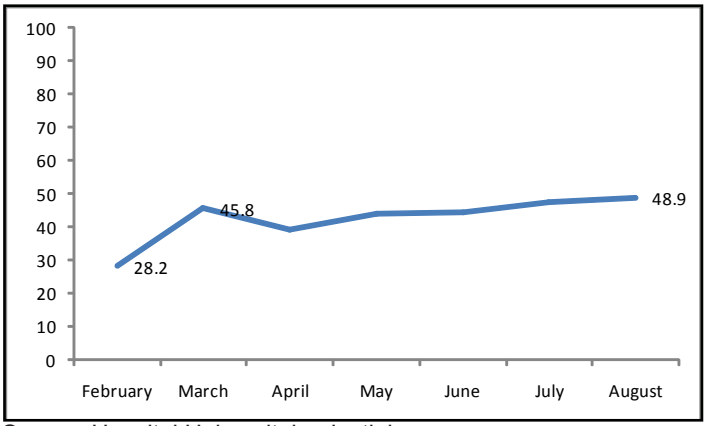
Source: Institute Fame Pereo

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.

DOH AIDS INSTITUTE HRI HEALTH RESEARCH INCORPORATED

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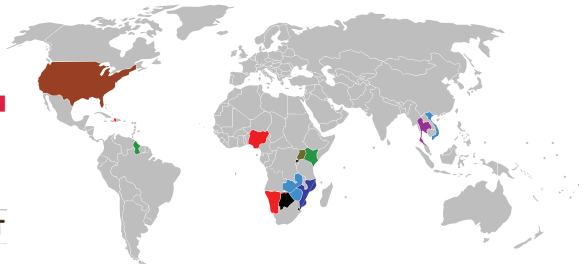
A PUBLIC HEALTH APPROACH TO QUALITY MANAGEMENT



In this issue:

2012 ACLN Participants

The 2012 All Country Learning Network was held March 26-30, 2012 in Kampala, Uganda, with nearly 200 participants from 16 countries in Africa, Asia, South America, North America, the Caribbean and the South Pacific and representatives from Ministries of Health, CDC country offices, CDC Atlanta, and the HRSA HIV/AIDS Bureau.

Expert plenary presentations addressed critical technical topics including TB infection control, improving HIV-free survival through NACS, a partnership for HIV-free survival to support PMTCT, HIT and QI, putting improvement into practice at a national level and diffusion, and retention in care in global HIV programs.

This year's topic, use of performance data to set national improvement priorities, challenged us to reflect on our programmatic progress and way forward as a fundamental goal of HEALTHQUAL.

The sharing of successes, implementation barriers and strategies to advance this work is guided by our common goals to achieve national quality frameworks that improve patient care and overall population health.

HEALTHQUAL thanks all participants and we look forward to continued engagement and exchange on these critical improvement topics.♦

JUNE 2012

Namibia Ministry of Health and Social Services A National Focus on Food Security

Background

Food security and nutrition are major factors in clinical outcomes for PLHIV. Through analysis of performance measures and patient feedback, the MoHSS identified food security as a significant barrier to quality of the national care and treatment program. To improve treatment adherence and reinforce the health of PLHIV, the MoHSS determined to prioritize nutritional screening and counseling for all HIV patients, and ensure appropriate referrals for patients with food security deficits.

Commonly identified barriers to adequate nutrition and food security among PLHIV in Namibia include: lack of a food security screening tool in HIV patient care booklets; poor documentation; absence of an effective referral mechanism; no adequate support groups; high staff turnover and heavy workload; high national unemployment and poverty rates; and alcohol abuse.

Interventions

A series of targeted interventions were implemented to address these challenges. Improvement activities were initiated at the clinic level and as part of national strategies promoted through the MoHSS at the various clinics, e.g. health edication, referral mechanisms - and advanced through Namibia's regional QI groups and other peer exchange and knowledge transfer activities. These included: development of a simple food security

Using Performance Data to Set National Improvement Priorities in Kenya

Background

HIVQUAL-Kenya is implemented at 35 clinics with 22 performance measures covering adult, pediatric, and PMTCT care. Two rounds of data have been collected at 15 wave one clinics and one round for the remaining 20 clinics.

Challenges to use of data for improvement

The lack of a register to track HIV exposed infants and HIV infected pregnant women enrolled in care represented a significant barrier to documentation for improvement. Further, information on HIV exposed infants was captured in the mother's file and not in an individual patient record.

In addition, analysis of baseline data indicated low CD4 testing rates among implementing clinics. The previously noted lack of a formal appointment system and mechanism for tracking CD4 tests results were identified as primary performance constraints.

Overall, round one data revealed little about exposed infants and pregnant women because of inadequate documentation - prompting the following changes.

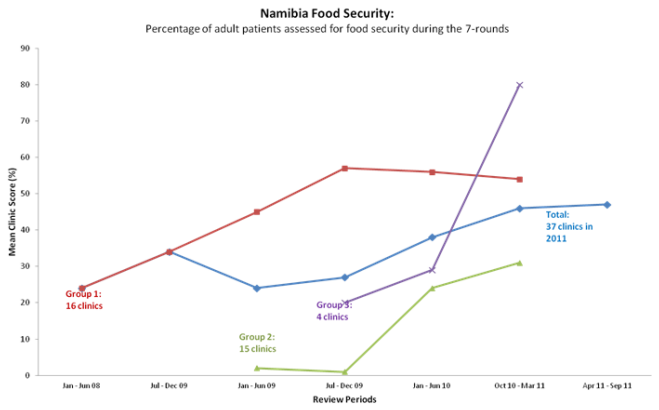
Improvements in Medical Records Systems

Daily Activity Registers

The Kenya National AIDS & STI Control Program (NASCOP) introduced Daily Activity Registers (DAR) to document patients' clinic attendance. The DAR facilitates recording of active patients and can be used to generate an active case list for data abstraction.

screening tool, implementation of a patient referral mechanism, training of healthcare workers on the need for food security screening, health education for patients with an emphasis on substance use and its impact on food security, reorganization of patient flow to streamline security assessment, implementation of a national Nutritional Assessment Counseling and Support (NACS) program to support nutrition, provision of food supplements, coordination with social workers, and initiation of community gardens and soup kitchens.

Serial Performance Data



Eligibility was defined as all patients with at least one clinical visit during the last 6 month period (patients age ≥15 years).

Lessons Learned

A quality improvement approach to food security can be an effective nutritional support tool for people living with HIV. Attention to screening and documentation is critical, as well as training of healthcare workers and patients to appreciate and understand attention to this area of care.

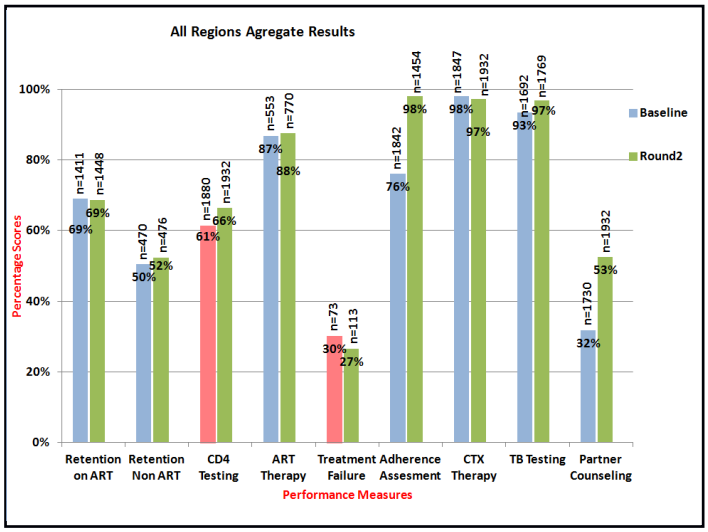
The MoHSS will continue to focus on improving food security screening and alcohol assessment given the close link between these two measures, and continue to focus on this area of care as integral to the success of Namibia's national care and treatment program.

Way Forward

The MoHSS remains focused on the need to refine and develop interventions aimed at food security. Planned activities include the rollout of a revised HIV patient care booklet incorporating food security screening and other indicators.♦

HIV Exposed Infants Register and Follow-up Cards

To document follow-up of HIV exposed infants and monitor care outcomes, NASCOP introduced an HIV exposed infant cohort register and follow-up cards. This register is designed to improve clinic level documentation and clinical follow-up of all HIV exposed infants. The follow-up cards are used to document HIV care for exposed infants as well as HIV testing results and growth monitoring. Further, clinics can now use HIV exposed infant registers and clinic follow-up cards for data abstraction.



Improving CD4 Testing

NASCOP implemented a series of changes to CD4 testing based on initial performance gaps and informed by small tests of change at implementing clinics. Based on these initial results, the following interventions were standardized across clinics.

- Formal appointment system for patients due for CD4 testing
- Merging of CD4 appointment dates with clinic dates
- Tracking of CD testing results by date

These interventions are now also being considered for national scale-up to all clinics.

Lessons Learned

Attention to clinic level systems and use of tools such as flow charts can help to identify unnecessary obstacles to care and contribute to activities focused on improvement. Accomplishment is often dependent on care coordination and teamwork at multiple levels - clinic, regional, national - to successfully scale-up improvements.

Next Steps

NASCOP plans to scale-up successful interventions beyond HIVQUAL implementing clinics to include additional regions and counties. Further strategies involve: partner engagement to support quality program expansion; strengthening of decentralized structures using a regional coaching model; integration of HIVQUAL indicators with different EMRs in-country to automate performance measurement; and transition beyond HIV care to other chronic and infectious conditions through adoption of HEALTHQUAL. ♦

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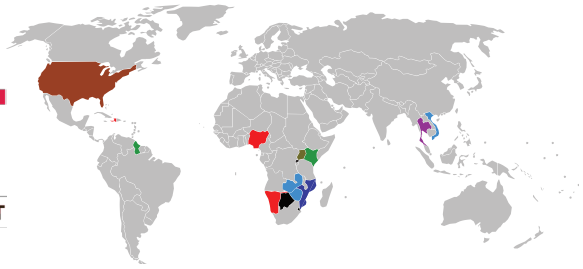


In this issue:

Impact of quality improvement programs in HIV care and treatment clinics in Namibia on intensified case finding and IPT coverage, 2008-2010

Co-Authors: MoHSS, Claudia Mbapaha, Ndapewa Hamunime, Farai Mavhunga, Ella Shihepo; CDC-Namibia, Dave Lowrance, Gram Mutandi, Sadhna Patel, Andrew Maher; University of Californa, San Francisco, Will McFarland.

Rationale for targeting TB indicators for quality improvement in HIV care & treatment facilities

Screening for TB
TB is highly common in Namibia and occurs disproportionately in people living with HIV. Screening patients for TB is an essential component of care that should be completed for all HIV-infected patients at each clinic visit.

Administering Isoniazid Preventive Therapy (IPT)
In the absence of active TB disease, preventive therapy with isoniazid has been shown to reduce the risk of acquiring active TB by approximately 40% and is recommended by national guidelines in Namibia.

Indicators targeted for quality improvement included percentage of eligible patients screened for TB and percentage of eligible patients given IPT.

Examples of QI projects targeting TB indicators in HIV care and treatment

Program	QI Project Description
Outapi Hospital	- TB screening tools displayed in all consulting rooms - Health education given to consumers on importance of IPT
Omaruru Hospital	- TB/IPT stamp (including IPT start/stop date, contraindications and side effects) developed and used to record IPT prescription information in the ART patient care booklet
Katatura State Hospital	- Emphasis given to documentation of TB screen/IPT in ART patient care booklet - Harmonization of IPT indicators within ART patient care booklet and IPT register used for tracking patients on IPT - Use of IPT stamp
Gobabis Hospital	- Emphasis on proper documentation of IPT stop/start date to avoid over/under prescribing - TB checklist used for all patients regardless of clinical status - Monthly, random sampling of files for regular data quality assessment

Methods of Analysis

Patient record data from 16 HIV care and treatment facilities were abstracted and used to assess trends in ICF and IPT coverage across four 6-month review periods from January 1, 2008 to June 30, 2010.

Using the health facility as the unit of analysis (N=16), the matched pair Wilcoxon rank sum test (WRST) assessed changes in TB Screen and IPT coverage from the first to fourth review period.

Performance measurement has been facilitated by the use of a national electronic Patient Management System (ePMS) that functions in all public hospitals and clinics that provide ART services, increasing the efficiency of data collection.

Chart sampling and data collection were performed following standard HIVQUAL methodologies.

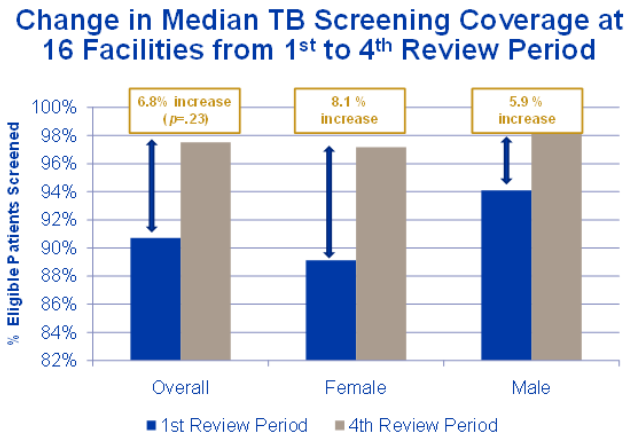
The sample includes all adult patients (15+ years old) that are registered and receiving care but not yet ART eligible as well as those on ART. All sampled patients had at least one clinical visit in the 6 month review period.

Descriptive analysis was performed to show TB screen and IPT coverage by sex, review period, and “on-ART” vs. “in-care” HCT status.

Logistic regression was used to explore potential disparities in quality of care.

Results

Overall, 8831 medical records were abstracted during the analysis period.



- Statistical analysis of trend done by matched pair Wilcoxon rank sum test to assess change in clinics from baseline first semester to fourth semester with the health facility as the unit of analysis (N=16)
- p value < 0.05 indicates a statistically significant change.

August 2012

4123 patients (65.5% female and 35.5% male) were deemed eligible and included in the TB screen analysis.
- On ART, n=2890 (794 female, 1096 male)
- In care, n=1303 (866 female, 437 male)

5603 patients (64.6% female and 34.4% male) were deemed eligible and included in the IPT analysis.
- On ART, n=4109 (2560 female, 1549 male)
- In care, n=2192 (1434 female, 758 male)

Summary of HIVQUAL-Namibia trainings and workshops

Training/work-shop title	Output	# of train-ings	# of people trained
Intro to HIVQUAL/ Basics of QI	Program managers and implementing clinics preparing to roll-out are given intro to HIVQUAL and basics of QM	5	129
Regional QI Workshops	Implementers are given a 'peer learning' focused platform to share best practices and review data with other clinics	19	434
Provider/Patient QI Workshop	Program managers and implementers are trained to integrate consumer involvement in QM work plans.	2	53
Training of Trainers in Total Quality Leadership	Program managers and in-service trainers are trained to integrate QM into regional work plans	1	46
Training of Program Managers	Program managers are trained to provide coaching and mentoring in QM at the regional level	6	135

Discussion

QI programs have sustained high TB screening and substantially increased IPT coverage in Namibia with nearly all HIVQUAL clinics demonstrating improvement in both indicators. Still, IPT coverage among eligible patients overall remains low.

Analysis exploring potential disparities suggests:
- Patients on ART are more likely to be screened for TB than patients in care. Conversely, patients on ART are less likely to be given IPT compared to patients in care.
- Younger patients appear less likely to be screened for TB, but more likely to be on IPT if screened.

Additional quality improvement efforts are needed to close these gaps, and research is needed to fully explain factors contributing to these disparities.

The following narrative has been adapted from a poster presentation presented at the XIX International AIDS Conference. This research has been supported by the President's Emergency Plan for AIDS Relief (PEPFAR) through the Health Resources and Services Administration (HRSA) under the terms of the grant UINHA08599.

About HIVQUAL-Namibia

HIVQUAL-Namibia was launched in 2007 as a collaboration between the Ministry of Health and Social Services (MoHSS), CDC-Namibia and HEALTHQUAL International.

In collaboration with HQI and CDC-Namibia, the MoHSS has been responsible for development of performance measures, training and related improvement activities, and program expansion to additional implementing clinics.

CDC-Namibia and HEALTHQUAL have provided technical assistance for program implementation, support, data collection and analysis.

Learn more about HEALTHQUAL on the web
www.healthqual.org

HEALTHQUAL.org provides key program information on each implementing country, a comprehensive quality improvement content library of QI tools, resources, templates and literature focused on improvement in low- and middle-income countries.

To build knowledge and reinforce peer exchange around improvement, we are building a public health community around critical improvement issues and look forward to your participation.

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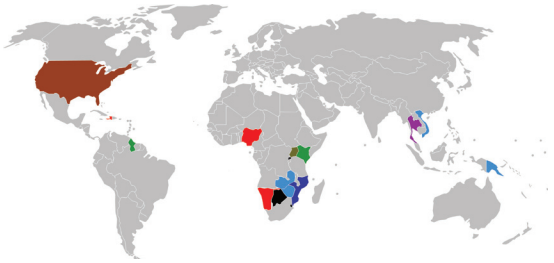


In this issue:

Use of an electronic medical record to implement, monitor and improve HEALTHQUAL clinical care indicator performance rates

Authors: Bijou, Sujata, MPH[1]; Labbé Coq, Nancy Rachel, MD, MSc[2]; Balan, Jean Gabriel, MD[2]; de Riel, Emily, MPH[1]; Tegger, Mary, PAC, MPH[1]; Petracca, Frances, PhD[1]; Lober, Bill, MD, MS[1]
1International Training and Education Center for Health (I-TECH), University of Washington, Seattle, WA, USA; 2I-TECH Haiti, Pétionville, Haiti

Introduction

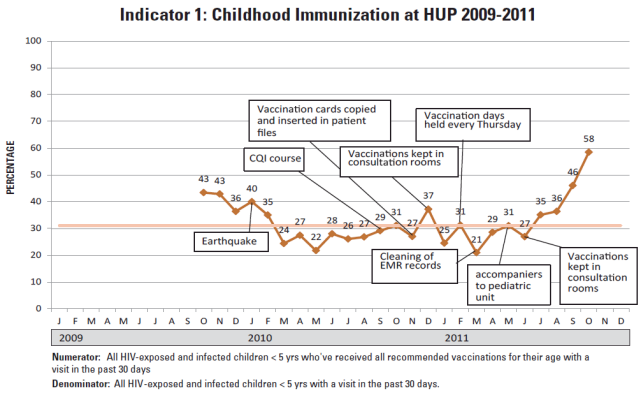
Improving health outcomes requires cost-effective scale-up of performance improvement systems. The electronic medical record system (EMR) in Haiti, iSanté, was developed in a collaboration between the Haitian Ministry of Health (MSPP) and the International Training and Education Center for Health (I-TECH) and Clinical Informatics Research Group at the University of Washington in 2005 to support clinical care of patients with HIV/AIDS. MSPP and I-TECH continue to work together to expand iSanté functionality to support primary care and have incorporated HEALTHQUAL International quality of care indicators to facilitate continuous quality improvement (CQI) in clinical care.

The use of an EMR for implementation and monitoring of HEALTHQUAL and other performance indicators can engage clinical mentors, clinic-level health care workers, and clinic-based teams in analyzing and using data for performance improvement.

Methods

I-TECH clinical mentors and EMR developers identified the specific data elements and indicator definitions necessary to produce the HEALTHQUAL Haiti indicator performance reports. Data are regularly transferred to MSPP, and clinic-based quality improvement teams use the reports to develop performance improvement projects targeting specific indicators based on HQ-Haiti national QI measures.

FIGURE 1: Childhood Immunization at HUP 2009-2011



The HEALTHQUAL indicators review care provided in six-month increments. To more closely track and respond to changes in performance, modified versions of the HEALTHQUAL indicators were developed to generate monthly reports (pictured) and enable clinic-level QI teams to develop Plan-Do-Study-Act (PDSA) cycles to address performance

problems. The EMR team, I-TECH clinical mentors, and QI teams at the clinics worked together with MSPP and other partners to identify and develop additional indicators important for care in Haiti.

Results

iSanté was successfully used for tracking performance indicators, and demonstrates improved performance through implementation of a continuous quality improvement PDSA approach to care processes. For example, as illustrated by the graph, between October 2009 and October 2011 the proportion of children who had received all recommended immunizations increased from 29% to 58% at Hôpital

October 2012

Université de la Paix. Improvement interventions included: inclusion of an immunization report card in the patient file, provision of vaccines in consultation rooms, dedicated vaccination day, data cleaning in the EMR and availability of accompagnateurs for the pediatric unit to guide patients throughout care and treatment.

Other improvements during the same period included PMTCT enrollment and CD4 testing; at Hôpital St Michel in Jacmel the enrollment rate of eligible women into the PMTCT program rose from 33% to 86%. At Hôpital Saint Damien, enrollment of eligible children in the ART program increased from 12% to 25%. Improved data collection and indicator definition programming demonstrate the power of QI methodology to facilitate use of data for improvement and acceleration of enhanced patient outcomes.

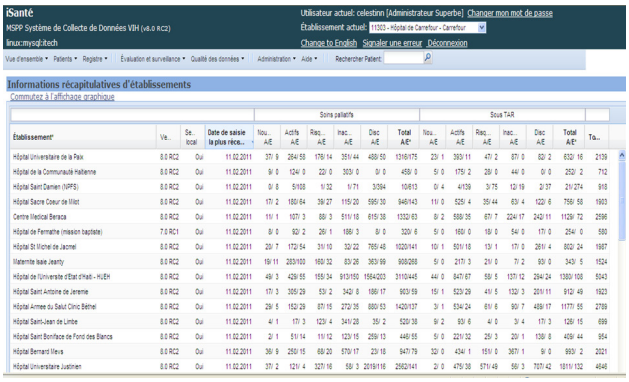
In Haiti, iSanté is an important tool for performance improvement projects leading to improvements in care delivery.

Conclusion

iSanté, in use at more than 60 facilities and maintaining electronic records for more than 100,000 patients, has now been expanded for use nationally in the primary care system. Quality improvement efforts supported by iSanté resulted in significant improvements in performance measures. This experience shows that the use of an EMR for implementation and monitoring of HEALTHQUAL and other performance indicators can effectively support decision-making for QI among clinical mentors, health care workers and clinic-based teams in analyzing and using data for performance improvement. In Haiti, iSanté is an important tool for performance improvement projects, and ultimately improvements in care delivery.

This improvement narrative has been adapted from a poster presented at the 2012 International AIDS Conference, developed by the International Training and Education Center for Health (I-TECH), with funding from PEPFAR (the US President's Emergency Plan for AIDS Relief) through Cooperative Agreement U91HA06801 from the US Department of Health and Human Services, Health Resources and Services Administration.

More on iSanté



All sites in Haiti transmit indicator data on a daily basis to a consolidated central server at the Ministry of Health in Port Au Prince, where the data is aggregated at the national level and available to Ministry analysts at the Monitoring, Evaluation and Surveillance Interface site (MESI).

iSante is currently utilized at more than 60 clinics nationally with more than 100,000 patient records entered. Data can be aggregated and reported at the clinic, regional and national levels.

Quality Management Development Program

HEALTHQUAL hosted 32 HIV program managers, QI/QA staff and senior Ministry of Health leadership from 7 countries including Namibia, Nigeria, Haiti, Kenya, Zambia, Zimbabwe and Vietnam for a week-long educational and peer exchange to reinforce QI knowledge and learning to build capacity for national quality management programs.

Stay tuned for coverage of QI from Papua New Guinea in next month's issue

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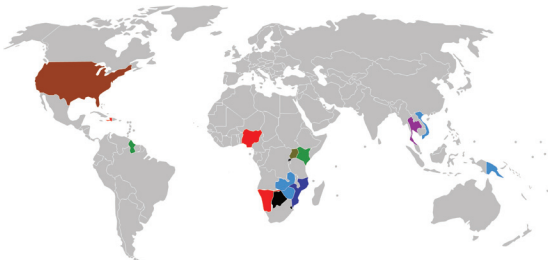
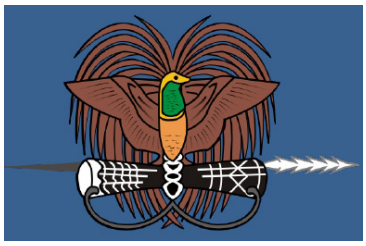


In this issue: HIVQUAL-PNG and QI in Papua New Guinea

Measuring and improving pediatric HIV care at a Mt. Hagen Provincial Hospital to identify national quality priorities for better quality improvement services



Authors: Dr. Petronia Kaima and Dr. Magdlyn Kaupa
National HIV/AIDS Program, Mt. Hagen General Hospital, PNG

Background

Located in the Western Highlands Province of Papua New Guinea (PNG), this region services a population of 500,000 people with the second highest rate of HIV infection in PNG, representing approximately 20% of all HIV infections nationally. As of 2011, there were 2410 adult and 115 pediatric HIV patients registered in care at the Mt. Hagen Hospital.

HIVQUAL was launched in 2009 at the Mt. Hagen Provincial Hospital and Tininga HIV clinic. Performance measures were developed by the National Department of Health (NDOH) with partners including the World Health Organization and HIVQUAL-Thailand.

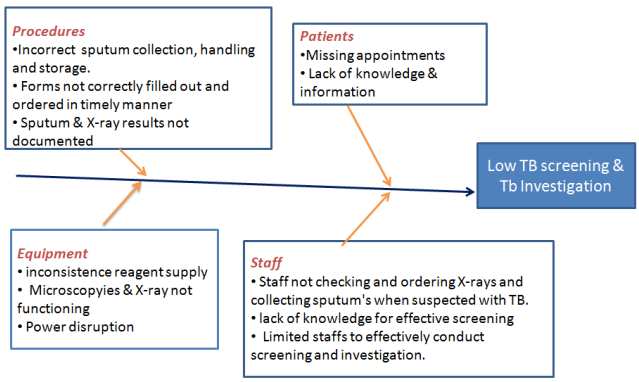
Objectives:

- To increase performance of core pediatric indicators during 2009-11
- To conduct ongoing measurement and determine priorities for QI-based results
- To develop QI activities in response to identified priorities
- To strengthen the quality management system of the hospital and the province

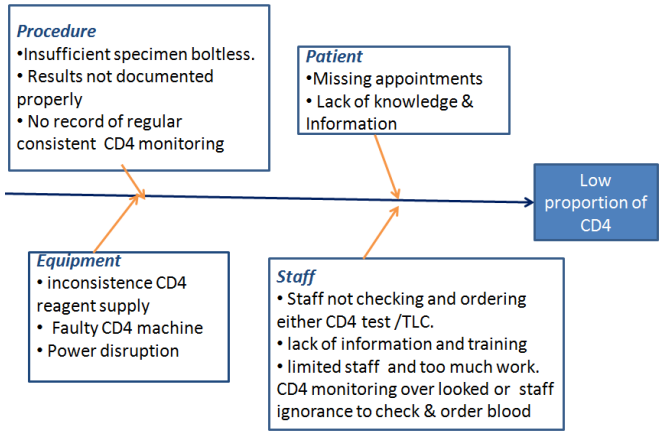
Improving Access to Care

In 2009, after a successful advocacy campaign, the pediatric clinic was established. The clinic offers regular and comprehensive care, including ART, growth & nutrition monitoring, counseling & testing, immunization, and TB screening and treatment.

Fish-bone diagram to identify Low rate of TB Screening and TB prevention therapy



Fish-bone diagram to identify Low rate of CD4 monitoring



Beginning in 2011, the pediatric clinic implemented several initiatives to improve care and increase adherence and retention, including provision of **nutritional supplements**, bus fare **reimbursement** and **systematic follow-up** with pediatric patients.

Additional Staff: Case Managers and PLHIV Mentors

Within three years, the pediatric clinic progressed from having no full-time staff with irregular physician's visits (2008), to an HIV program staffed with three full-time nurses, one clinical HEO, two PLHIV mentors and a full-time physician.

PLHIV expert patients provide daily adherence education and counseling and follow-up for patients lost-to-follow-up

Improving CD4 Monitoring & TB Screening

To reinforce systematic clinical processes, several coordinated interventions and process improvements were tested and implemented:

- **Documentation** of CD4 and TB screening
- **Timely CD4 request** and **proper sputum collection**
- Development and implementation of **CD4 monitoring forms**
- **TB assessment forms developed** and utilized for screening and INH prophylaxis
- TB officer to formally implement **training for all HIV officers** and reciprocal **HIV training for TB officers**
- Focus on improved **coordination between HIV and TB units**

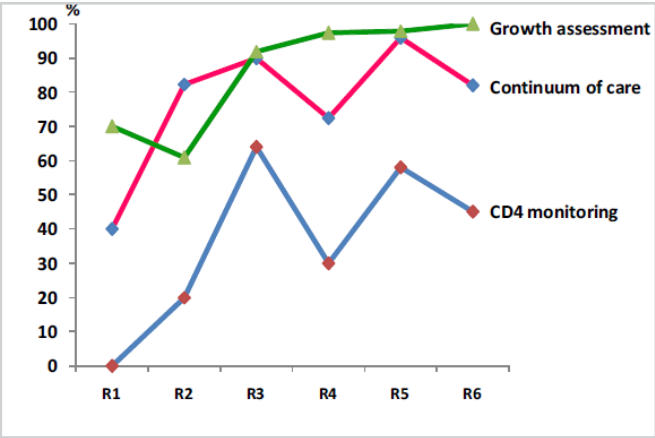
December 2012

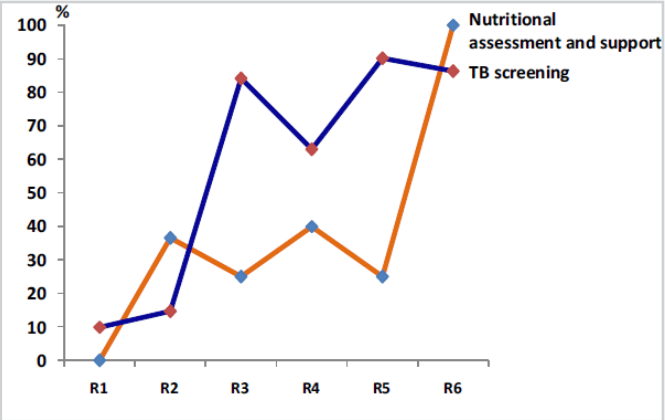
Quality Management

Staff at the Tininga pediatric clinic sought to build the institutional framework for QM and focused on the following areas:

- establishment of a **quality coordinating committee**
- improved **coordination** with Mt. Hagen Provincial Hospital's leadership and management, including core service teams
- need to initiate **regular** provincial **QI committee meetings**
- continued semi-annual performance measurement and QI activities based on data
- provincial and local staff advocates for **national QI framework**

Increasing Coverage of Pediatric HIV Care and Treatment in 2009-2011





Indicator	Definition
Growth assessment	Proportion of HIV-infected children receiving weight for age (W/A) assessment at every visit
Continuity of care	Proportion of HIV-infected children who have had at least 1 visit during the last 3 months
CD4 monitoring	Proportion of HIV-infected children receiving a CD4 test in the past 6 months
Nutritional assessment & support	Proportion of HIV-infected children with weight for age less than 10th percentile receiving nutritional education and supplementation
TB screening	Proportion of HIV-infected children who have been screened for history of TB contact or TB symptoms using TB score card during the last 6 months

PLHIV Mentors

Improvements in care were evidenced in the following areas (data pictured, left):

1. Reduce the high rate of children lost to follow-up
2. Access to care for children
3. Enhanced immunologic monitoring
4. Reinforced TB screening and treatment
5. Growth monitoring and nutritional assessment to provide nutritional support

Conclusion

Staff at Tininga embraced **performance measurement** based on statistical methods as critical to **identifying quality improvement needs and priorities**. With an institutional focus on building a sustainable quality management program, the team recognized the need for l**eadership, coordination and training** both at the national and provincial levels. Finally, development of a **national improvement framework** was essential to addressing performance gaps and is a key component of the national program.

As a result, the core technical working group was expanded to assure broad representation with technical knowledge both at the national and provincial levels and the quality of care coordination committee was expanded to include wider health sector representation to guide QI scale-up.

Lessons Learned and next steps

- Indicators need to be regularly updated based on national guidelines
- Peer learning and networking with national and international partners enhances learning of QI skills and sharing of experiences
- Analyze data and current indicators using updated software for similarities and inconsistencies

Acknowledgements: National Department of Health, PNG; World Health Organization (PNG Office); CDC/GAP Thailand Regional Office; HEALTHQUAL International; HIVQUAL Team members; Mt. Hagen Provincial Hospital; implementing partners - CHAI PNG.

Stay tuned for coverage on nutrition assessment and counseling from Dandora Health Center, Kenya in next month's issue

HEALTHQUAL is supported through the US Department of Health and Human Services, HRSA 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.

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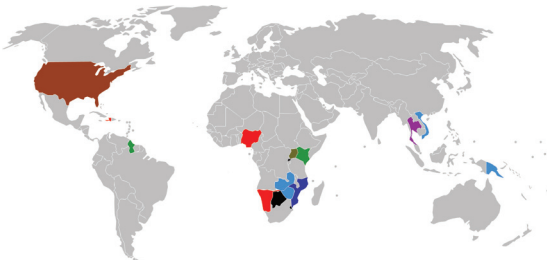
A PUBLIC HEALTH APPROACH TO QUALITY MANAGEMENT



In this issue: An improvement approach to nutrition in Kenya

Integration of Nutrition Assessment and Counseling into Primary Care Through Improvement: Dandora Health Center, Kenya

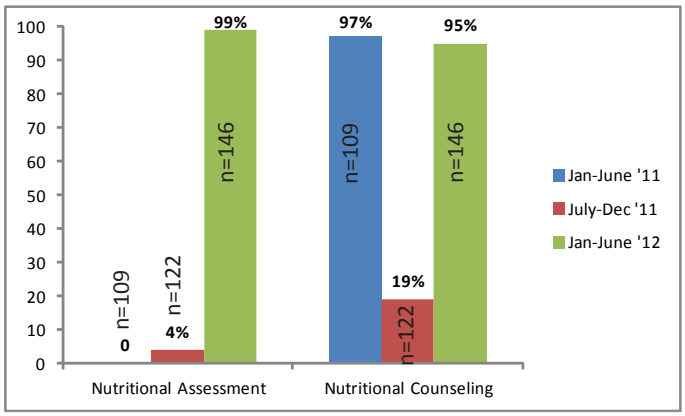
Dandora Health center is located in the Njiru District of Nairobi, Kenya's capital. The catchment population is an estimated 318,000 for the district and 150,000 for Dandora and the immediate surroundings. Dandora is a public facility sponsored by the Nairobi City Council, Ministry of Public Health and Sanitation, Ministry of Medical Services and NASCOP with support from other stakeholders and civil society organizations.

Comprehensive care clinic services commenced in 2004 and include outpatient care, TB, laboratory, nutrition, orphans and vulnerable children and home based care, dental, antenatal and prevention of mother to child transmission care, voluntary male circumcision and HIV testing and counseling.

There are currently 1600 active patients on Dandora's patient register with many more lost to follow-up due to Dandora's high rate of population movement between the city and the District.

QI Team
Dandora's improvement team includes a clinician in charge/ team lead, a nursing officer, records officer, nutritionist and expert patient.

Nutrition assessment and counseling, Dandora Health Center



Wide fluctuation in scores represents the process of necessary clarification of the clinical guidelines and definition of the measure based upon them. This has been addressed as part of the national program and clinica QI projects through staff education (p2).

Goal
Baseline data, January to June 2011, indicated that no clients received a nutrition assessment and 97% of clients received nutrition counseling. The QI team ambitiously determined to increase the number of clients receiving nutrition assessment and counseling.

The team met to brainstorm reasons for the evident gap in performance and used process analysis to determine obstacles to conducting nutrition assessment and effective counseling.

Gaps Identified
The team identified several areas to focus, including:

- redesigning the patient triage process
- linkage back into care for defaulting clients
- need for provider skills on nutrition assessment and counseling
- insufficient, inconsistent adherence counseling
- education on indicator definitions

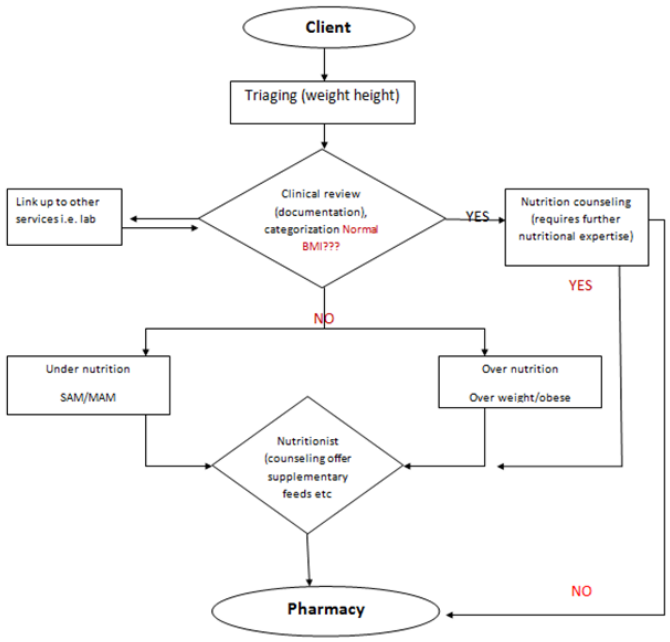
Changes in Care Processes

- The team first determined to **establish a linkage with the health center's nutritionist** for twice weekly review of patients in the clinic

January 2013

- **Nutritionist mentored the nursing officer and clinician** on **nutritional assessment and counseling strategies** to **integrate this activity at time of primary care visit**
- **Body Mass Index (BMI) charts were posted in clinicians' rooms** as a reminder on nutritional cut-offs
- To reduce the burden of high patient case load on the clinician, the **team provided weighing scales and height boards at triage where expert patients were engaged to complete this task**
- To improve documentation, **patient weight, height and BMI were also entered into patient cards by these expert patients and also included in the nutrition register**

Flow chart to explain proposed solutions to low percentage of clients assessed and counseled on nutrition.



- To effectively triage, the clinician would resequence patients in order of patient flow before referral to the nutritionist
- To improve documentation and better detail treatment practices, **nutrition notes were added into the patient file** – including food prescribed – and duplicated in the nutrition register
- **Coaching on nutrition was provided by the QI lead** for the QI team and facility staff on indicator definitions for nutritional counseling and assessment

Results

Follow-up results, July to December 2011, nutritional counseling dropped from 97% to 19% (baseline to follow-up) and nutritional assessment increased from 0 to 4% (baseline to follow-up). Preliminary data for January to June 2012 evidence improvement in assessment, rising from 4% to 99% and counseling up from 19% to 95%

Lessons Learned from Dandora

The team recognizes the importance of holding regular QI committee meetings to review systems in the HIV clinic. Internal coordination and external links are being strengthened to reinforce sustainability.

Dandora staff are committed to accurately assessing patient nutritional status and providing counseling on the importance of nutrition as an integral component of their HIV work. They remain focused on reinforcing systems to facilitate data collection with more accurate documentation to improve patient care and outcomes.

Lessons learned from nutrition QI projects in Kenya

Dandora is one of several clinics that have applied an improvement approach to nutrition assessment and counseling. Additional gains from these projects have included:

- Integration of nutritional services into primary healthcare services
- Data-driven pursuit of improving nutritional assessment, counseling and referrals
- Clarification of guidelines and procedures – and dissemination to health care workers
- Discovery and understanding of processes and procedures that led to understanding of gaps and challenges
- Involvement of expert patients as part of task shifting
- Redesign of process and system
- Recognition of the impact of food and nutrition on achievement of health outcomes

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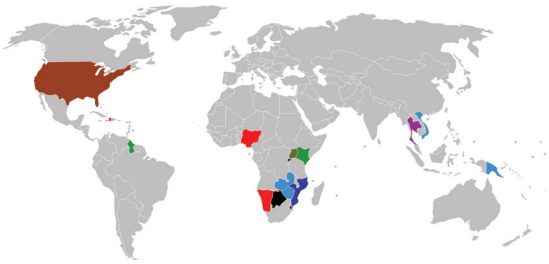


In this issue:

HIVQUAL Vietnam: National and local leadership support for improvement in HIV care & treatment

The first national HIVQUAL-Vietnam meeting was held on 13 November 2012 in Ha Noi with strong support and participation from senior leaders - including the Vietnam Ministry of Health (MOH), Vietnam Authority of HIV/AIDS Control (VAAC), the Department of Health (DOH) and full engagement of Provincial AIDS Centers (PACs), incuding PAC of Thanh Hoa, and CDC Vietnam.

The meeting included 170 participants, representing the 5 HIVQUAL pilot provinces and the Director of the Department of Health (DOH), Director of the Provincial AIDS Center (PAC), Director of Hospital/ Prevention Medicine and clinic doctors, nurses and consultants.

Other government agencies in attendance included the Vietnam Administration of Medical Services (VAMS), Ha Noi School of Public Health (HSPH) and the Pasteur Institute.

Opening remarks were delivered by Associate Professor Nguyen Thanh Long, PhD, Vice Minister, MOH; Vivian Chao, PEPFAR Coordinator; and Michelle McConnell, Director, CDC Vietnam. Presentations included results and lessons learned from 11 Out Patient clinics (OPCs) in the 5 pilot provinces delivered by Dr. Do Thi Nhan, MOH/VAAC Care and Treatment Chief; improvement coaching and mentoring from Dr. Le Ngoc Yen, HIVQUAL Lead at CDC Vietnam; a talk on the direction and next steps of HIVQUAL Vietnam, 2013-2015 presented by VAAC; and a presentation by HEALTHQUAL Director, Dr. Bruce Agins on building sustainability for national quality management programs.

Two group discussions followed, one comprised of management, including leaders from DOH, PAC and VAMS and chaired by Dr. Bui Duc Duong, Deputy Director of VAAC and Dr. Nguyen Trong Khoa, Deputy Director of VAMS - and the other of OPC staff, including OPC Chief, doctors, nurses, Provincial QI coordinators, and DOH technical staff. The leadership group focused on QM expansion, responsibility of provincial QM committees and challenges, while the OPC group addressed indicators, coaching and the importance of team work for improvement.

As noted, implementing health facilities and programs were invited to present improvement work, which is highlighted in this issue.

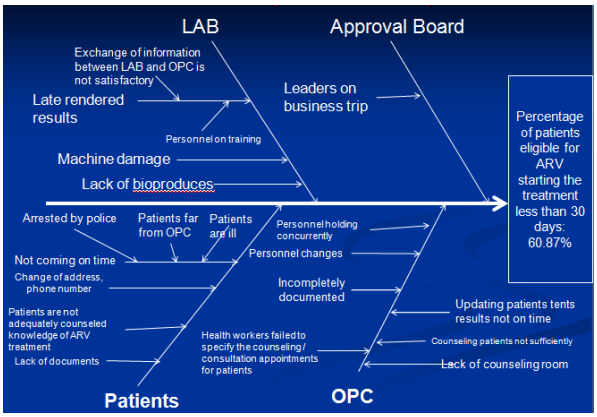
QUALITY IMPROVEMENT AND TREATMENT & CARE AT MEDICAL CENTER OF THANH HOA CITY OUT PATIENT CLINIC (OPC)

As of September 2012, there were 6005 people living with HIV in Thanh Hoa City and 1799 patients on ARV therapy supported through the quality care and treatment program, including 81 children.

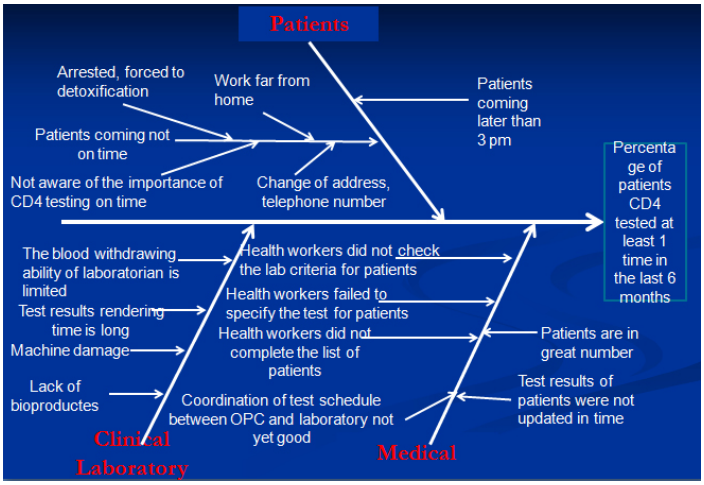
The outpatient clinic (OPC) of the Thanh Hoa City Medical Center was opened in 2005, treating patients from Thanh Hoa and 17 surrounding districts and towns. The OPC is staffed by three doctors, three counselors, one nurse and one pharmacist with support from the Global Fund.

With strong leadership support from the Department of HIV/AIDS Prevention, Thanh Hoa Province established a technical working group focused on improving the quality of care and treatment at the provincial level. The Medical Center subsequently established a formal QI group in the OPC tasked with defining staff responsibilities for institutional improvement activities and drafting an annual improvement plan.

After an initial performance review, OPC selected two national indicators to prioritize for improvement: a) to increase the proportion of patients eligible for ARV, who start ARV treatment within 30 days, from 61% to 90% in Thanh Hoa OPC between January and September 2012 and b) to increase the proportion of patients tested for CD4 at least one time in the last six months, from 43% to 80% during the same period.



Focus: ARV enrollment - selection of solutions		
Root causes	**Solutions**	**Method of implementation**
Counselor has not adequately prepared patients for treatment	Improve counseling process for patients	Counselors focused on consulting for compliance before treatment
		Establish counseling rooms
CD4 test results late	Adopt a common way of rendering CD4 test results	Assignment of OPC staff to deliver CD4 test results from AIDS center weekly



Focus: CD4 testing - selection of solutions		
Root causes	**Solutions**	**Method of implementation**
Patients not aware of importance of CD4 testing	Improve patient knowledge of CD4 testing	re-consulting/re-training patients and families about CD4 testing
Doctors did not check the lab criteria for patients in a timely manner	Reviewing and building the list of eligible patients	Nurses make a list of eligible patients for testing at each consultation
		Reviewing the CD4 test time of patients before examination
Laboratory results not regularly updated	Regular updating of lab results in medical records	Always compare the list of tests and results
Time to render test results is too long	To shorten the time required to render test results	Establish two days weekly for an assigned staff person to deliver results

The team developed a workplan to guide action and implementation of each proposed solution with a specific timeline and staff person/ people responsible for monitoring and completion.

A formal leadership structure to pursue program goals was critical. The program management team chaired briefings with a provincial technical group and OPC, meeting monthly.

Management worked with the departments to coordinate implementation between OPC, the lab for CD4 and other relevant departments to optimize realization of stated goals.

REPORTING AND FOLLOW-UP

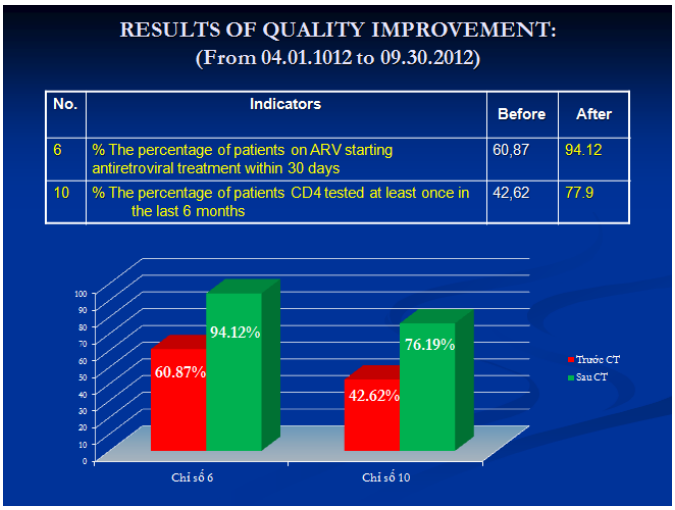
The program coordinator was tasked with monthly reporting to the management team, with quarterly briefings to the Center of AIDS Prevention and to the Department of HIV/AIDS Prevention.

The OPC QI staff held weekly briefings on improvement implementation plans, assigning staff to work according to the plan and timeframe established.

The Provincial QI group provided technical support to OPC monthly or as needed.

Monthly briefings were held between the provincial Center of AIDS Prevention and the OPC for review of data and strategies selected for the improvement focus. Ideas and obstacles were discussed to identify next steps and approaches to resolve and overcome challenges.

Concurrently, the team began planning for the next improvement priority, set out to integrate QI into regular briefing activities of the province and continued close coordination with the central technical support team as needed.



LESSONS LEARNED

- Value of strong and consistent leadership from the central QI management team
- Importance of regular technical support in planning, data collection and analysis at the local and provincial levels
- Establishment of a formal QI management and technical team at the provincial level
- Dedication among OPC staff for program implementation with a focus on team work

CHALLENGES

- Heavy work load and competing priorities remain
- There is a continued need to spread improvement knowledge and build skills for data management among staff, including use of the HIVQUAL-Vietnam software
- High patient case load is complicated by their geographic spread for follow-up
- Resource allocation across OPCs is low when compared with the great demand for services and attention to issues associated with the quality of patient care

WAY FORWARD

- Ongoing QI technical support from the Central team for OPC staff will be critical for spread and scale-up of national implementation, which includes additional QI training for staff in Thanh Hoa City, at OPC and other OPCs in the Province

Please note: the above text pertains to the improvement project described herein and not content from the national conference.

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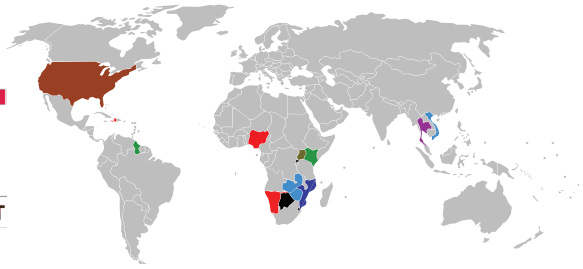


In this issue:

Impact of quality improvement programs in HIV care and treatment clinics in Namibia on intensified case finding and IPT coverage, 2008-2010

Co-Authors: MoHSS, Claudia Mbapaha, Ndapewa Hamunime, Farai Mavhunga, Ella Shihepo; CDC-Namibia, Dave Lowrance, Gram Mutandi, Sadhna Patel, Andrew Maher; University of Californa, San Francisco, Will McFarland.

Rationale for targeting TB indicators for quality improvement in HIV care & treatment facilities

Screening for TB
TB is highly common in Namibia and occurs disproportionately in people living with HIV. Screening patients for TB is an essential component of care that should be completed for all HIV-infected patients at each clinic visit.

Administering Isoniazid Preventive Therapy (IPT)
In the absence of active TB disease, preventive therapy with isoniazid has been shown to reduce the risk of acquiring active TB by approximately 40% and is recommended by national guidelines in Namibia.

Indicators targeted for quality improvement included percentage of eligible patients screened for TB and percentage of eligible patients given IPT.

Examples of QI projects targeting TB indicators in HIV care and treatment

Program	QI Project Description
Outapi Hospital	- TB screening tools displayed in all consulting rooms - Health education given to consumers on importance of IPT
Omaruru Hospital	- TB/IPT stamp (including IPT start/stop date, contraindications and side effects) developed and used to record IPT prescription information in the ART patient care booklet
Katatura State Hospital	- Emphasis given to documentation of TB screen/IPT in ART patient care booklet - Harmonization of IPT indicators within ART patient care booklet and IPT register used for tracking patients on IPT - Use of IPT stamp
Gobabis Hospital	- Emphasis on proper documentation of IPT stop/start date to avoid over/under prescribing - TB checklist used for all patients regardless of clinical status - Monthly, random sampling of files for regular data quality assessment

Methods of Analysis

Patient record data from 16 HIV care and treatment facilities were abstracted and used to assess trends in ICF and IPT coverage across four 6-month review periods from January 1, 2008 to June 30, 2010.

Using the health facility as the unit of analysis (N=16), the matched pair Wilcoxon rank sum test (WRST) assessed changes in TB Screen and IPT coverage from the first to fourth review period.

Performance measurement has been facilitated by the use of a national electronic Patient Management System (ePMS) that functions in all public hospitals and clinics that provide ART services, increasing the efficiency of data collection.

Chart sampling and data collection were performed following standard HIVQUAL methodologies.

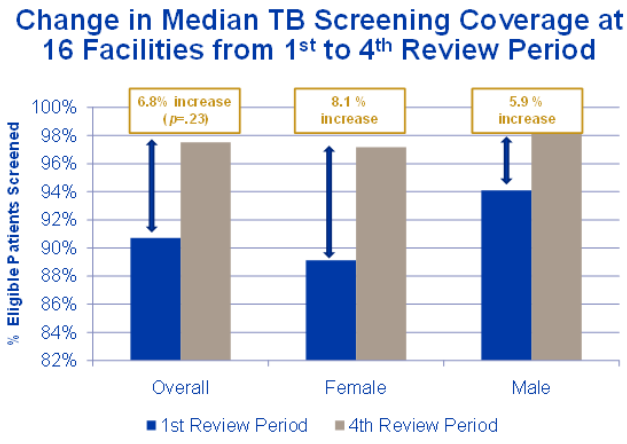
The sample includes all adult patients (15+ years old) that are registered and receiving care but not yet ART eligible as well as those on ART. All sampled patients had at least one clinical visit in the 6 month review period.

Descriptive analysis was performed to show TB screen and IPT coverage by sex, review period, and “on-ART” vs. “in-care” HCT status.

Logistic regression was used to explore potential disparities in quality of care.

Results

Overall, 8831 medical records were abstracted during the analysis period.



- Statistical analysis of trend done by matched pair Wilcoxon rank sum test to assess change in clinics from baseline first semester to fourth semester with the health facility as the unit of analysis (N=16)
- p value < 0.05 indicates a statistically significant change.

August 2012

4123 patients (65.5% female and 35.5% male) were deemed eligible and included in the TB screen analysis.
- On ART, n=2890 (794 female, 1096 male)
- In care, n=1303 (866 female, 437 male)

5603 patients (64.6% female and 34.4% male) were deemed eligible and included in the IPT analysis.
- On ART, n=4109 (2560 female, 1549 male)
- In care, n=2192 (1434 female, 758 male)

Summary of HIVQUAL-Namibia trainings and workshops

Training/work-shop title	Output	# of train-ings	# of people trained
Intro to HIVQUAL/ Basics of QI	Program managers and implementing clinics preparing to roll-out are given intro to HIVQUAL and basics of QM	5	129
Regional QI Workshops	Implementers are given a 'peer learning' focused platform to share best practices and review data with other clinics	19	434
Provider/Patient QI Workshop	Program managers and implementers are trained to integrate consumer involvement in QM work plans.	2	53
Training of Trainers in Total Quality Leadership	Program managers and in-service trainers are trained to integrate QM into regional work plans	1	46
Training of Program Managers	Program managers are trained to provide coaching and mentoring in QM at the regional level	6	135

Discussion

QI programs have sustained high TB screening and substantially increased IPT coverage in Namibia with nearly all HIVQUAL clinics demonstrating improvement in both indicators. Still, IPT coverage among eligible patients overall remains low.

Analysis exploring potential disparities suggests:
- Patients on ART are more likely to be screened for TB than patients in care. Conversely, patients on ART are less likely to be given IPT compared to patients in care.
- Younger patients appear less likely to be screened for TB, but more likely to be on IPT if screened.

Additional quality improvement efforts are needed to close these gaps, and research is needed to fully explain factors contributing to these disparities.

The following narrative has been adapted from a poster presentation presented at the XIX International AIDS Conference. This research has been supported by the President's Emergency Plan for AIDS Relief (PEPFAR) through the Health Resources and Services Administration (HRSA) under the terms of the grant UINHA08599.

About HIVQUAL-Namibia

HIVQUAL-Namibia was launched in 2007 as a collaboration between the Ministry of Health and Social Services (MoHSS), CDC-Namibia and HEALTHQUAL International.

In collaboration with HQI and CDC-Namibia, the MoHSS has been responsible for development of performance measures, training and related improvement activities, and program expansion to additional implementing clinics.

CDC-Namibia and HEALTHQUAL have provided technical assistance for program implementation, support, data collection and analysis.

Learn more about HEALTHQUAL on the web
www.healthqual.org

HEALTHQUAL.org provides key program information on each implementing country, a comprehensive quality improvement content library of QI tools, resources, templates and literature focused on improvement in low- and middle-income countries.

To build knowledge and reinforce peer exchange around improvement, we are building a public health community around critical improvement issues and look forward to your participation.

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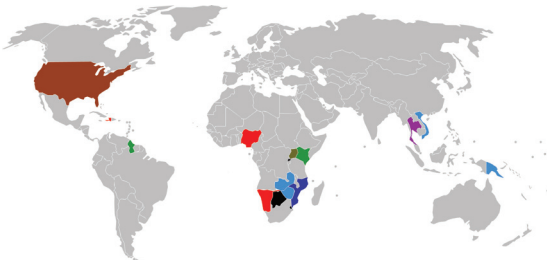


In this issue:
Improving TB Program Indicators at Mkushi District Community Medical Office, ZAMBIA

Author: Valencia M. Phiri,
Registered Nurse/District TB Focal Person

REASONS FOR SELECTING THE PROJECT

The Zambia Ministry of Health has prioritized attention to tuberculosis as a national public health issue. Performance for the national TB program is measured through selected indicators, which are based on national guidelines and globally accepted standards of care. These indicators include: TB cure rate, TB defaulter rate, TB mortality rate, TB success rate, TB notification rate, TB completion rate, TB patients tested for HIV (Figure 1, p2) and HIV positive TB patients initiated on HAART.

In Mkushi district, the TB indicators had been plummeting for three years. For example, the TB cure rate was 54% in 2010 and then dropped to 44% in 2011. This TB coverage deficit in the district was a source of concern at national, provincial and district levels. In October 2012, the district community medical office team made a number of organizational changes, which resulted in the appointment of a new District TB Focal Person.

Implementation of interventions and activities aimed at improving the TB indicators were intensified between October 2012 and June 2013. Analysis of data collected during and after the intervention period demonstrated notable improvement in a number of the TB indicators, which was achieved with committed personnel, enhanced teamwork and support, as well as aggressive implementation of improvement activities.

IMPLEMENTATION PERIOD

For this project, tracking of the TB indicators started in October 2012 and continued through June 2013. Data collection is ongoing.

IMPLEMENTATION CHALLENGES

1. Lack of transport for follow up and defaulter tracing
2. Inadequate staffing in the centers
3. Poor documentation of data in the registers
4. Limited diagnostic centres in the district (only at hospital and Masansa health centre)
5. Lack of infrastructure, e.g., most centres don't have TB rooms, e.g. at Chibefwe, the TB room is also used for ART
6. Lack of funds, e.g., world TB day not commemorated in the district in 2013
7. Treatment supporters in most centres not active, which complicates directly observed treatment, short-course (DOTS)
8. Poor adherence to treatment by some patients due to poor nutrition and not disclosing to their spouses

MAIN INTERVENTIONS/ACTIONS

The main interventions/activities implemented include:

Education	• The District TB Focal Person was oriented in TB registers and reporting by the Provincial TB Focal Person in November 2012 • Increased sensitization of communities on TB through Mkushi community radio station, health education in health facilities • Discussion of TB guidelines with clinicians and other health workers at Mkushi district hospital and also during district integrated management meeting (DIM) in November 2012 ***Training and skills building*** • Training of 25 TB treatment supporters in Chibefwe health center in February 2013 with support from TB Care • Training of 25 TB treatment supporters each in Chalata, Mkushi Coppermine, Masansa and Nkumbi between March and June 2013, with support from Bwafwano Integrated Services Organization • Improved skills in TB diagnosis among health centre staff through technical support and mentorship • General workers were trained in TB/ART data tracking for five days
Human resources for health	• Hiring of a district TB Focal Person • Revamping of TB treatment supporters in health facilities (mainly at Chibefwe health center, which contributes to over 80% of TB patients in the district) • One clinical officer was specifically attached to the ART clinic at the hospital in January 2013
Processes	• Follow up of all patients on treatment for submission of sputum from patients who were due • Improved support and regular feedback to district TB Focal Person from provincial and district medical officer senior staff

MAY 2014

Figure 1: % TB cases tested for HIV

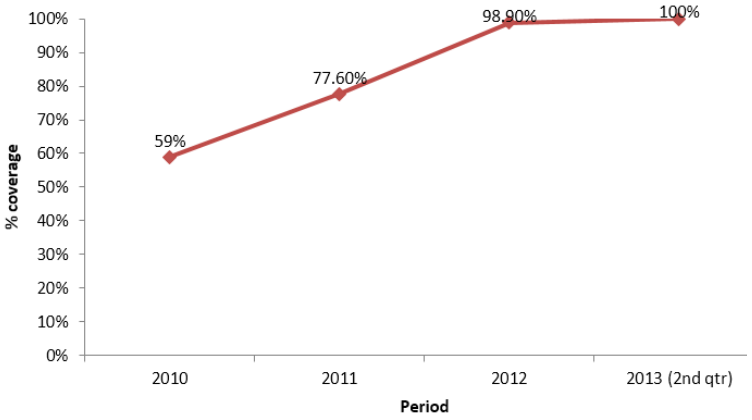
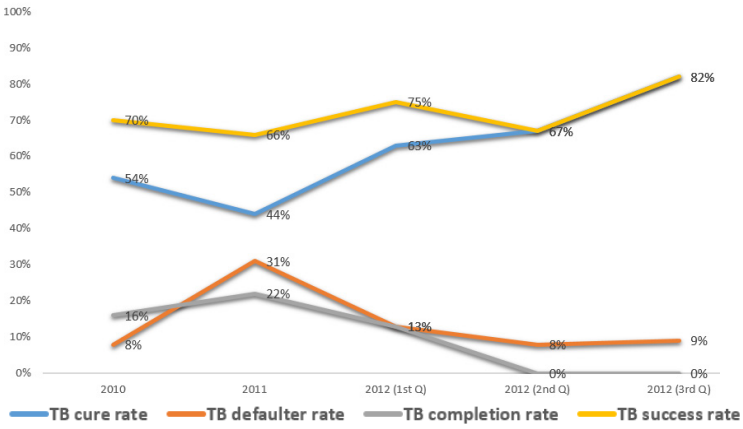


Figure 2: TB Indicator Performance



ACHIEVED PERFORMANCE

Since the appointment of the district TB Focal Person in the last week of September 2012, TB program indicators have consistently improved.

Figure 2 shows longitudinal improvement across the TB indicators: the **TB Cure Rate increased** from 44% in 2011 to 67% in 2012 (2nd Q); the annual **TB Defaulter Rate decreased** from 31% in 2011 to 8% in 2012 (2nd Q); the annual **TB Completion Rate decreased** from 22% in 2011 to 0% in 2012 (positive) (2nd Q); and the annual **TB Treatment Success Rate increased** from 66% in 2011 to 82% in 2012 (3rd Q).

The team determined to reduce the defaulter rate through targeted activities, such as: reinforcing defaulter tracing, **ensuring community treatment supporters report monthly on their progress** with the patients they support, and **ensuring all TB patients have a treatment supporter** (relative, treatment supporter or clinic staff).

As described in the table on page one, **treatment supporters were trained across the district** and assigned at the health care facility level, with emphasis at Chibefwe due to their significant TB burden.

Given the high burden of HIV, **TB/HIV integration was also prioritized**. Interventions addressing this area of care included: **updating all health facility staff on guidelines** for managing TB/HIV co-infection, health care facility **adherence to the guidelines**, ensuring staff are trained in ART (20 of 26 facilities already have trained ART staff), and increased **sensitization among communities on HIV testing in TB patients**.

LESSONS LEARNED

Improving TB care and treatment at the district level is possible with adequate and committed health facility staff utilizing team work to execute targeted interventions aimed at identified gaps in care. Collaboration is critical, not only among health facility staff, but across stakeholders who include TB treatment supporters, private practitioners and traditional healers.

SUSTAINING IMPROVEMENT

Plans are underway to institutionalize successful changes and strengthen interventions that build knowledge and expertise for improved TB care and treatment. For example, health center staff will be further trained in diagnosis and treatment of TB and smear preparation. Collaboration among stakeholders, particularly building and reinforcing partnerships between TB and HIV programs through convening of joint meetings, will continue.

Enhanced patient-centered treatment through DOTS will remain an area of focus, as well as other forms of patient support to promote adherence and advance treatment outcomes. Incentives will also be offered to motivate treatment supporters, including bicycles and cooking supplies. ♦

Table 1. TB/HIV Integration

Indicator	2012 (4th Quarter)	2013 (1st Quarter)	2013 (2nd Quarter)
# TB patients	60	30	26
# TB patients tested for HIV	60 (100%)	30 (100%)	26 (100%)
# TB patients HIV+	46 (77%)	16 (53%)	11 (42%)
# TB patients initiated on HAART	46 (100%)	16 (100%)	11 (100%)
# TB patients initiated on CPT	46 (100%)	16 (100%)	11 (100%)

TREND HIV TESTING IN TB PATIENTS: *The number of registered TB patients who are tested for HIV, after giving consent during their TB treatment.*

TREND CURE RATE: *The percentage of positive pulmonary TB cases who complete treatment and have a negative sputum result at six months.*

TREND DEFAULTER RATE: The *percentage of TB patients who stop treatment for 14 consecutive days in the intensive phase and for 2 consecutive months in continuation phase.*

TRENDS TB TREATMENT SUCCESS RATE: *New smear positive pulmonary TB patients that are successfully treated (sum of those 'cured' plus 'treatment completed').*

HEALTHQUAL is supported through the US Department of Health and Human Services, HRSA as the International Quality Center for PEPFAR.For more information on HEALTHQUAL or the HEALTHQUAL Update, please contact Joshua Bardfield at jbardfield@healthqual.org

HEALTHQUAL INTERNATIONAL
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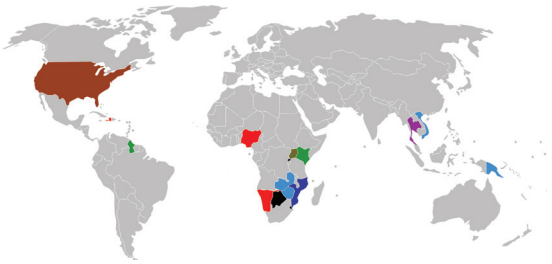


In this issue:

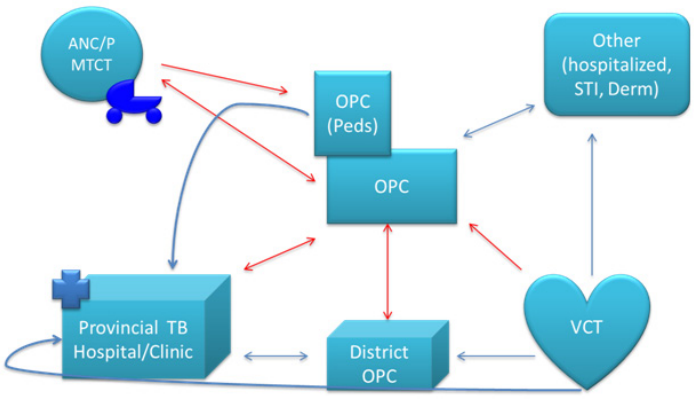
Improving HIV-TB referrals and care coordination Thai Binh Province, Vietnam

Authors: Thai Binh PAC, OPC, TB clinic and HAIVN team

Thai Binh province is 120 km south-east of Hanoi, Vietnam's capital city. The estimated number of people living with HIV in the province is more than 3000. Five adult outpatient clinics (OPCs) and one pediatric OPC in the province deliver HIV care & treatment. Vietnam's national quality management program, HIVQUAL-Vietnam, has been implemented in Thai Binh OPCs since 2010 with technical support from the Ministry of Health, CDC-Vietnam, and the Harvard Medical School's Partnership for Health Advancement in Vietnam (HAIVN). Prior to HQ-Vietnam implementation, all QI projects initiated in Thai Binh were focused on internal issues within the OPC, without attention to **coordination of care** between services and care at other facilities, such as HIV/TB. The Thai Binh provincial AIDS prevention and control center (PAC) and OPCs determined to focus on linkages between HIV related services and the perceived gap in coordination between those services, which included an identified need to improve the scope of guidance from PAC.

In August 2012, a qualitative survey was conducted to gain a better understanding of the main HIV related linkages in Thai Binh province (Figure 1). The survey was performed by interviewing medical staff from different hospitals and clinics in Thai Binh to gain insight into gaps in the referral processes between the various clinics. These gaps included a non-uniform use of the referral forms, lack of a formal notification procedure to the referred service, lack of a formal feedback procedure to the referring service, minimal coordination among the services (e.g. quarterly meetings or round table discussions), and lack of leadership or supervision for referral procedures.

Figure 1: Map of basic linkages of HIV related services, Thai Binh province



Analysis of survey results demonstrated the need for an official referral procedure, which also requires formal approval by and support from the provincial Department of Health.

To put the procedure into practice and to apply additional quality improvement strategies, a quantitative assessment of specific linkage between the provincial adult OPC and TB clinics was completed. The rationale for focusing on this linkage was triggered by the high rate of HIV-TB coinfection and a request from the OPC.

The provincial HIV OPC is the largest OPC in Thai Binh, with nearly 400 currently active patients in care, among which, there are more than 300 patients on ARVs. This baseline assessment was developed with three indicators (Table 1) based on the definition of a successful referral from OPC to the TB clinic, which was defined in the referral procedure:

- Documentation of referrals from OPC to TB clinic should be recorded in the OPC referral logbook
- Referrals received at the TB clinic within 1 week should be documented in both HIV and TB referral logbooks
- Feedback should be documented in the OPC logbook within 2 weeks after referring the patient from OPC to TB clinic

Table 1: Indicators for successful referral from OPC to TB clinic
1: % of patients with a documented positive TB screen during the review period who were referred to the TB clinic
2: % of referring patients documented in the OPC referral logbook during the review period who have a TB appointment within 1 week of referral
3: % of patients referred to TB clinic, with referral result (feedback) documented in OPC logbook within 2 weeks

A QI meeting was held with the participation of PAC, adult OPC and the TB clinic to discuss the assessment results and to develop a QI plan to improve the linkage. At the meeting, the group determined to focus improvement efforts on indicator number 2, % of referrals received at the TB clinic within 1 week and documented in both HIV and TB referral logbooks.

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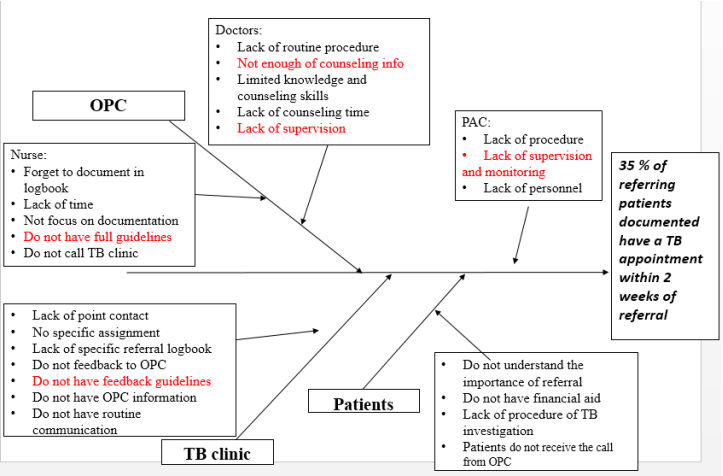
Figure 2: Fishbone, reasons for gaps in patient referrals



Note: The causes in red were chosen as root causes.

A fishbone diagram (Figure 2) and a flowchart (Figure 3) were developed to analyze the gap and root causes.

QI plan: For the two causes related to a lack of guidelines in OPC and the TB clinic, a referral procedure was developed and approved by the provincial Department of Health. This referral procedure provides instructions and specific referral forms for a variety of linkages such as: VCT-OPC, OPC-TB, etc.

For the other root causes, a QI plan was created identifying staff responsible for each intervention and an implementation timeline. Activities included:

- Assigning staff and a point of contact for referrals
- Developing instructions covering essential counseling information for referring patients
- Creating a telephone contact list
- Adding referrals to the agenda of daily morning meetings
- Calling the TB clinic every other Friday for follow-up
- Midterm and 6-month assessments

Indicator 3, % of patients referred to TB clinic, with referral result (feedback) documented in OPC logbook within 2 weeks **increased from 50% at baseline to 100% at most recent follow-up** where it has steadily remained.

Indicators 1 and 2 require continued attention; not all positive TB screens were referred, and of those referred, not all have arrived at the TB clinic. Follow-up will focus on

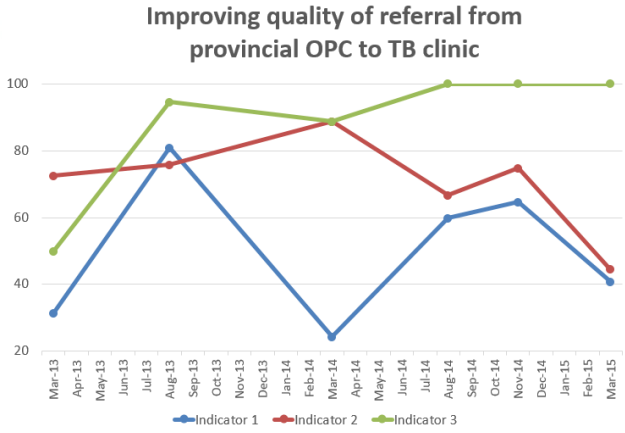
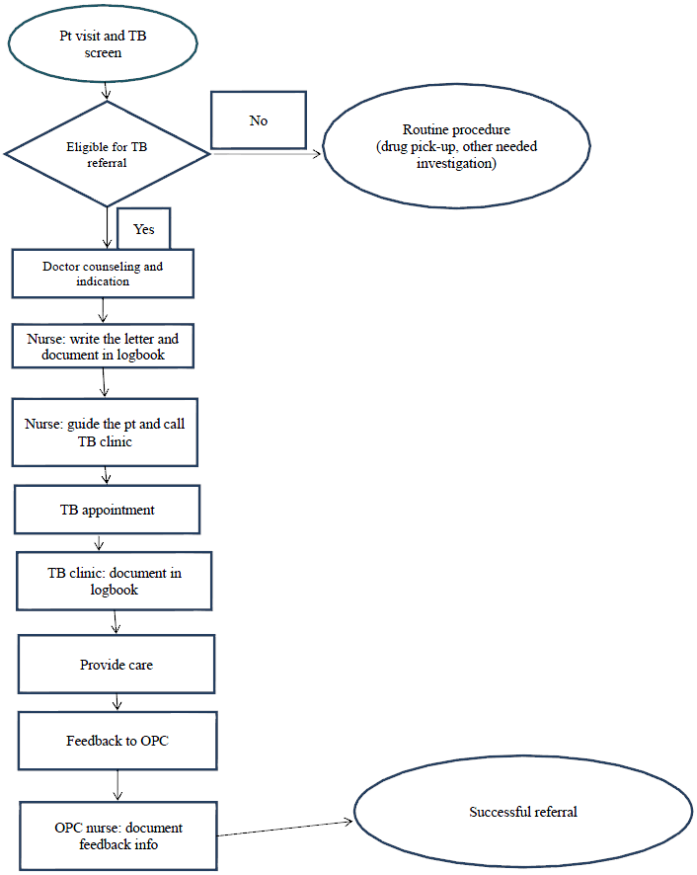


Figure 3: Patient Referral Flowchart



ensuring uniformity and clarity of referral procedures for healthcare workers.

Despite continued challenges, this coordinated effort between Thai Binh OPC, the TB clinic and PAC resulted in dedicated focal people in charge of notification and feedback for referrals; availability of counseling materials; referral logbooks at TB facilities; a phone directory for the TB facility and OPC; regular dialogue; and summaries of evaluation results.

Barriers related to staff time, patient compliance and patients' financial resources should be addressed, yet assessment of this intervention demonstrated several advantages.

Leadership involvement at both facilities and staff working for both clinics, increased capacity for application of improvement methods among medical staff, enhanced communication between facilities, and routine and clear documentation of referrals were all strengthened.

This initiative has encouraged expansion for other linkages, such as VCT and OPC, for which a baseline assessment is currently underway. In addition to providing a roadmap for expansion, this project underscores the importance of bilateral engagement from both clinics in improvement initiation.♦

HEALTHQUAL is supported through the US Department of Health and Human Services, HRSA as the International Quality Center for PEPFAR. For more information on HEALTHQUAL or the HEALTHQUAL Update, please contact Joshua Bardfield at joshua.bardfield@health.ny.gov