

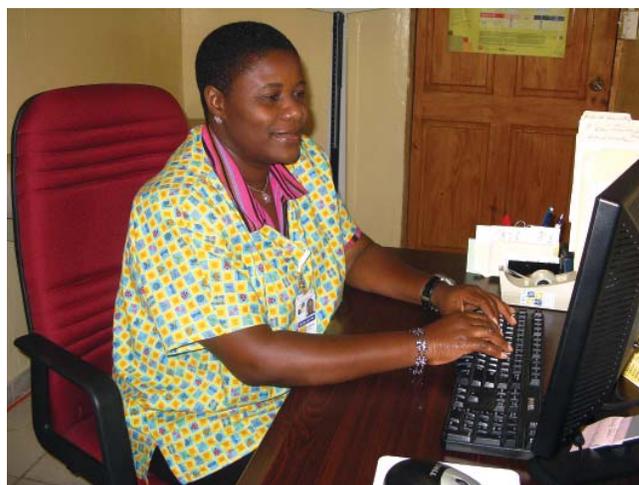
I-TECH Haiti Clinical Mentoring Program: The Internal Model

Background

In 2004, the Ministère de la Santé Publique et de la Population (MSPP) and the Centers for Disease Control and Prevention Global AIDS Program (CDC GAP) in Haiti invited the International Training and Education Center on HIV (I-TECH) to support scale-up of HIV testing, care, and treatment in Haiti. CDC and the MSPP identified a central role for I-TECH in introducing comprehensive HIV care at Hôpital de l'Université d'Etat d'Haïti (HUEH), the largest public hospital in the country and the country's only tertiary referral hospital. HUEH has 800 beds, receives roughly 150,000 patients per year, and is the site where the majority of medical and nursing students in Haiti are trained (approximately 300 medical students, 80 residents, and 300 nursing students annually).

When I-TECH launched its clinical mentoring program at HUEH in 2005, the hospital's infrastructure was in a state of disrepair due to years of being underfunded and neglected. HIV testing was not available at HUEH. Patients who presented with opportunistic infections (OI) suggestive of underlying HIV infection were sometimes referred for testing to the Groupe Haïtien d'Etude du Sarcome de Kaposi et des Infections Opportunistes (GHESKIO), a private nonprofit center for HIV research and services in Port-au-Prince. Minimal HIV services were available at HUEH, however, providers were unable to sufficiently respond to the huge need for HIV care and treatment due to lack of funding and antiretroviral therapy (ART).

The government of Haiti released its Plan Stratégique National in 2002, which identified a key role for HUEH in the scale-up of HIV care and treatment, and created national guidelines for HIV testing, care, and treatment—including ART in 2003. However,



even by 2005, HUEH's capacity to meet this role was virtually nonexistent. At that time, only four physicians and nine nurses at HUEH had received any HIV-related training. Other significant barriers to ART scale-up included personnel shortages, a widespread public perception of the poor quality of services at HUEH, limited physical and material infrastructures, and a commodities logistics system with no timely or reliable delivery of drug and testing supplies.

In concert with their support for the I-TECH Haiti clinical mentoring program, the MSPP and the United States government (USG) team allocated funds from the President's Emergency Plan for AIDS Relief (PEPFAR) to make physical improvements at HUEH, and to build an infectious disease (ID) unit. Other partners, such as Management Sciences for Health (MSH), Jhpiego, and Family Health International (FHI), provided technical assistance and critical inputs to assure availability of pharmacy and laboratory commodities and services, launch psychosocial-support services and linkages to community-based programs for people living with HIV and AIDS (PLWHA), and provide training on HIV to nonclinical staff at HUEH.

I-TECH Haiti Clinical Mentoring Program

Clinical mentoring was identified as the most effective way to meet the goals for HIV care and treatment at HUEH and in Haiti. I-TECH officially launched its clinical mentoring program at HUEH in December 2005, with the support of the MSPP and USG partners.

The mentoring program at HUEH had several goals:

- Provide knowledgeable clinical mentors who will establish an outpatient HIV clinic that will provide voluntary counseling and testing (VCT), palliative care, and ART services, as well as an ID unit to serve inpatient needs;
- Introduce continuous quality improvement processes focused on quality of HIV patient care; and
- Assist the hospital directors to coordinate strategic inputs for ART scale-up from multiple partners including the MSPP, USG Haiti team, and various nongovernmental partners at HUEH.

Additional goals included training health care providers from units across HUEH on the care and treatment of PLWHA, assisting in the creation and implementation of standardized medical records for HIV patients and for the Haiti National Electronic Medical Records (EMR) system, and developing and delivering curriculum and training materials for pre-service medical education.

With the successful launch and stabilization of HIV programs at HUEH, I-TECH's clinical mentoring program added new goals:

- Improve skills and materials within local institutions, such as the MSPP and regional and national training centers for in-service training in HIV and AIDS-related topics; and
- Increase extension of high quality adult and pediatric HIV and AIDS-related clinic and community-based services in sites beyond HUEH.

Recruitment and Hiring of Clinical Mentors

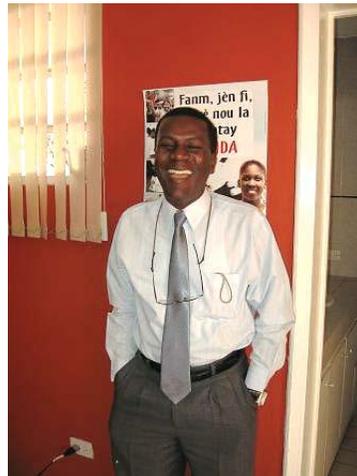
The USG team in Haiti initially encouraged I-TECH to recruit external clinical mentors who would work at HUEH for extended periods of 3 to 12 months to reinforce existing hospital personnel. In view of the tenuous security situation in Haiti in 2005, I-TECH abandoned this strategy and recruited two local Haitian physicians to work as full-time clinical mentors at HUEH. Through a rigorous selection process, I-TECH hired Dr. Jean Gabriel Balan, a pediatrician who completed a fellowship in HIV medicine in France, and Dr. Yves Lambert, a senior ID specialist based in Haiti. Both had a strong commitment to remaining and continuing to practice in Haiti. As is typical among many physicians there, both had been drawn primarily into private sector practice for economic reasons. Employment with I-TECH allowed them to refocus their attention to providing high-quality care and treatment in the public sector. As well-respected members of the medical community in Haiti, the new mentors brought to their roles extensive experience practicing medicine at HUEH and teaching at the Faculté de Médecine (FM), strong relationships with key stakeholders and decision makers, and a deep understanding of the processes involved in the delivery of care and treatment in Haiti.

In 2007, I-TECH hired three additional clinical mentors to provide clinical consultation, onsite mentoring, and technical assistance at HUEH. Selected as physician mentors were Dr. Marinho Elisma, an internist who had been a stand-out as a staff physician in the HUEH HIV clinic, and Dr. Nathaelf Hyppolite, a family practice specialist who had overseen HIV care at a rural hospital. Ms. Estère Michel, a nurse with extensive experience in clinical trials for antiretroviral (ARV) regimens in Haiti, was hired to lead the training and integration of nurses in HIV care and treatment at HUEH.

Training, Ongoing Support, Monitoring, and Evaluation of Clinical Mentors

I-TECH acknowledges the importance of and provides support for continuing education to the clinical mentors through one-on-one mentoring, clinical trainings, professional meetings, and distance learning courses. To date, I-TECH has supported its clinical mentors' participation in various professional development opportunities, such as:

- A 2-week preceptorship at the Royal Victoria Hospital (RVH) at McGill University in Montreal, Quebec, Canada. I-TECH chose RVH as the preceptorship site because of its reputation as a well-respected HIV care and treatment site that serves a large Haitian-Canadian population, and because of its bilingual French and English environment.
- A 2-week preceptorship at the Owen Clinic at the University of California, San Diego, which is a model for the multidisciplinary approach to HIV care and treatment.
- A 3-day study tour of the HIV care and treatment program at Jackson Memorial Hospital at the University of Miami in Florida.
- A 1-week study tour to observe a quality assurance and quality improvement (QA/QI) model at the New York AIDS Institute, in collaboration with CDC.
- A 1-week training of trainers (TOT) on QA/QI principles at CDC in Atlanta, in collaboration with the New York AIDS Institute.
- A 2-day orientation to assessment and implementation of a QA/QI plan, in partnership with the New York AIDS Institute and CDC.
- A 1-week I-TECH clinical summit that included shadowing and interviewing the multidisciplinary clinical team at the Madison Clinic at Harborview Medical Center at the University of Washington (UW) in Seattle.
- A 2-week course on program monitoring and evaluation (M&E) and continuous quality improvement (CQI) methods in Senegal, facilitated by MEASURE Evaluation.
- A 2-week course called "Principles of STD-HIV Research" based at UW.
- A 3-day course on quality HIV care and CQI processes facilitated by the New York AIDS Institute/HIVQUAL Project.
- Individual mentoring at HUEH from Dr. Chris Behrens, I-TECH Medical Director, as the mentors provided HIV care and treatment training to other HUEH providers, interns, and residents.
- Two weeks of individual mentoring from Mary McCarthy, RN, NP, from the Owen Clinic. During this time, recommendations for the development of a nurse mentoring program and the rationale for the need to shift tasks to and expand the role of nurses in the ID unit were drafted.
- A UW School of Medicine course titled "Management of HIV and STI," which consists of a web-based curriculum and weekly seminars that aim to develop and build upon HIV and STI care and treatment skills. The clinical mentors in Haiti participate in the English language sessions, adapt the content, and then facilitate workshops for groups of HUEH staff in French.



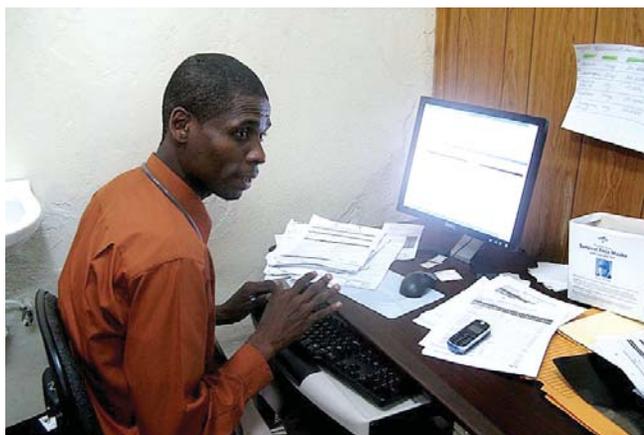
In order to facilitate constant communication and collaboration across I-TECH, the senior clinical mentors, Drs. Balan and Lambert, attend weekly staff meetings at the I-TECH Haiti office. These meetings help mentors and staff coordinate I-TECH

projects and serve as a forum for them to address challenges. The senior mentors share information from these meetings with the junior mentors. The mentors also write and submit a report four times per year describing their activities, challenges and constraints, best practices, and lessons learned.

Activities and Achievements of the I-TECH Haiti Clinical Mentoring Program

Capacity Building at HUEH

- When the first two I-TECH clinical mentors were hired in December 2005, no HIV testing services and minimal care or treatment services were available at HUEH. By April 2008, 2,700 patients were enrolled in HIV care and 379 had begun ART at HUEH.



- The clinical mentors instituted a program to receive and provide around-the-clock care and treatment for victims of accidental blood exposure and sexual violence in partnership with Médecins du Monde. The I-TECH mentors trained 24 health care providers from Port-au-Prince and surrounding areas on the provision of care to victims, in coordination with the Director of HUEH, Médecin du Monde, and the Projet d'appui à la lutte contre les IST/VIH-SIDA en Haïti (PALIH). This program is often featured in the Haitian media, and has been lauded as a model program by the administration of HUEH.
- All of the clinical mentors participate in weekly HUEH staff meetings because they are an integral part of the administration and daily processes involved in the provision of care and treatment. These meetings help the mentors to share lessons learned from their work in the ID ward, as well as provide an opportunity for the staff and mentors to identify challenges, build consensus around issues, and institute long-lasting processes to bring about change.

Training of HUEH Interns, Residents, and Staff at HUEH

- In 2007, the I-TECH mentors trained all 106 medical school interns and 22 residents at HUEH, in addition to four residents at l'Hôpital de la Paix in Port-au-Prince, on the care and treatment of PLWHA through classroom-based training, grand rounds, and one-on-one mentoring.
- The I-TECH mentors trained 41 students from private medical schools through rotations at HUEH and by using the national curriculum on the care and treatment of PLWHA, in coordination with the MSPP.
- All 60 nurses in the pediatric, internal medicine, and outpatient wards at HUEH who were initially targeted have completed training in HIV and AIDS care and treatment.
- The senior clinical mentors participated in the revision, development, and dissemination of national HIV care and treatment guidelines and training tools, in partnership with the MSPP.

Capacity Building at Other HIV and AIDS Care and Treatment Sites

- Through the fellowship program, in 2007 and early 2008, the I-TECH mentors trained 69 health care workers from sites in Port-au-Prince and the 10 Haitian health departments on the provision of ART in accordance with the national HIV plan.
- The MSPP and PEPFAR USG team have supported plans for I-TECH mentors to begin providing technical assistance to secondary health centers and hospitals in addition to their work at HUEH.
- By early 2008, the I-TECH mentors had conducted 15 site visits outside of HUEH. In addition to clinical mentoring, the mentors have provided clinical and administrative staff with recommendations for systems-level improvements and further clinical training.
- The I-TECH mentors assessed 18 sites to determine if they had instituted a QA/QI plan, in collaboration with the HIVQUAL team, the MSPP, and CDC.

Other Accomplishments

- The senior clinical mentors assisted the MSPP in the development of national pediatric HIV care and treatment guidelines in collaboration with I-TECH's partner, the François Xavier Bagnoud Center (FXB) of the University of Medicine and Dentistry of New Jersey.
- The senior clinical mentors participated in the revision, development, and dissemination of national HIV care and treatment guidelines and training tools, in partnership with the MSPP.

Continuous Quality Improvement

The clinical mentors have been instrumental in establishing weekly CQI meetings at HUEH. These meetings create an opportunity for the mentors to identify new issues and challenges, follow-up on CQI initiatives, and plan Plan-Do-Study-Act (PDSA) cycles. PDSA is an approach to continuous quality improvement in which clinicians test a change for improvement on a small scale, observe the results, and adjust or expand the work based upon their findings.

To date, the mentors have completed two PDSA cycles at HUEH. In April 2007, 50% of patients who tested positive for HIV failed to enroll in the HIV care and treatment program at HUEH. In order to address this issue, mentors introduced a plan in which health care workers accompany patients who have just tested positive for HIV across the large HUEH campus. Same-day appointments at the HIV care and treatment unit are made available, and a dedicated "welcome team" of clinicians receive newly-tested HIV-positive patients. Through these simple, low-cost interventions, the mentors were able to reduce the lost-to-follow-up rate to only 20% by November 2007. From January to March 2008, the lost-to-follow-up rate was below 14%.

In March 2008, the clinical mentors applied the PDSA cycle methodology to the issue of ARV drug adherence counseling. Adherence counseling is vital to preventing drug resistance, but mentors discovered that it was not being systematically conducted. While the EMR includes an adherence counseling form, it was not being utilized. In order

to increase documentation and tracking of patients who receive adherence evaluation and counseling, the mentors have recently tested the form for efficiency, and trained nurses and physicians to use the form. It is anticipated that these initiatives will help to increase tracking of adherence counseling.

To address a widespread failure to evaluate and document ART adherence at HUEH, the clinical mentors implemented a chart tracking and review system for pediatric HIV patients at HUEH, to provide feedback to attending clinicians. Patient charts were reviewed, and findings and suggestions for improvement were presented at HUEH staff meetings to help improve the quality of care and services.



Best Practices and Lessons Learned

1. The embedded clinical mentor model has produced significant institutional transformations in one of the most complex hospital settings in Haiti. As part of the Haitian health care system, the mentors possess a deep understanding of that system, and have an established network of professional connections.
2. The clinical experience, original ideas, and initiative of the individual mentors are critical factors in the success of the I-TECH clinical mentoring program at HUEH.
3. The use of PDSA cycles has resulted in improved health outcomes at HUEH by galvanizing health care providers, and establishing concrete parameters and processes for continuous quality improvement.

4. Participation in weekly HUEH staff meetings, weekly clinical mentor CQI meetings at HUEH, and weekly I-TECH Haiti staff meetings facilitate communication and integration of the mentors as full members of both the HUEH and I-TECH teams. This integration supports contributions to improve service delivery at HUEH, while also strengthening pre-service and in-service clinical training in Haiti.

Challenges

1. I-TECH would like to further strengthen its oversight and support of full-time clinical mentors in Haiti. I-TECH's network-wide strategies to support clinical mentors have included the creation of an email listserv for all I-TECH clinical mentors to disseminate relevant clinical updates. The I-TECH network has also launched a bimonthly distance learning series using videoconference technology to present case-based modules on timely topics in HIV care and treatment. Both strategies rely on English-language communication and Internet access. It is a challenge for I-TECH Haiti's clinical mentors to fully connect and benefit from these network-level initiatives, because several have limited English abilities and Internet access at HUEH is intermittent.
2. In Haiti, partner organizations run clinical mentoring programs, which follow program models and approaches that may differ from I-TECH's approach. Regular communication and sharing of best practices and challenges between programs would facilitate program-level continuous quality improvement. The MSPP has asked I-TECH to extend training and staff development opportunities to mentors from other organizations.
3. Overall health care workforce shortages in Haiti mean that clinical mentors often face pressure to directly provide patient care, making it difficult to carve out time and space for mentoring activities with frontline clinicians.
4. Plans have been formulated, in partnership with the MSPP and the PEPFAR USG team, for the mentors to begin providing technical assistance to secondary health centers and hospitals, in addition to providing onsite mentoring and technical assistance at HUEH. However, the process of consolidating institutional change at HUEH is complex, and continues to require heavy involvement by I-TECH's mentors. The clinical mentors have a wide breadth of responsibilities, and it is challenging for them to find time to focus on new initiatives.
5. Systems to deliver quality patient care are highly complex, and often depend on inputs beyond the sphere of control of the clinical mentors. For example, at times, HUEH faces breaks in the availability of CD4 count tests, which decreases the enrollment of new patients on ART and effective monitoring of the immune status of existing patients. This makes it difficult for mentors to model quality care and treatment of PLWHA to interns, residents, and attending physicians. In these cases, the mentors have risen to the challenge by serving as advocates for stronger systems, and by modeling other methods to monitor and enroll patients, such as lymphocyte-count testing and clinical staging.

Future Direction of the I-TECH Haiti Clinical Mentoring Program

The I-TECH clinical mentors continue to test and refine strategies to document, monitor, and evaluate their work. In December 2007 and January 2008, the I-TECH clinical mentors used a tracking tool to compile information on 100 clinical consultations. The content of these consultations was analyzed by the two senior mentors and used to assess the training needs at HUEH. Based on the data, the mentoring team will begin holding targeted training with HUEH staff based on frequently-asked questions, such as:

- What is the best test to use for diagnosing HIV in infants?
- What is the pathophysiology of Immune Reconstitution Inflammatory Syndrome (IRIS)?
- How do you manage patients coinfecting with HIV and syphilis?

The mentors may periodically repeat use of the mentoring tracking tool to keep their programs focused on learners' needs.

In September 2008, the clinical mentors, in collaboration with the MSPP, will launch a fellowship program in HIV care and treatment at the Centre d'Information et de Formation en Administration de la Santé (CIFAS), a training center at HUEH. Fellows, who are physicians from clinical sites throughout Haiti, will participate in programs lasting from several weeks to several months. During their fellowship, they will complete morning rotations in designated units of the hospital, and attend didactic presentations and case conferences during the afternoon.

I-TECH is increasing its support for HUEH's role as a center of excellence for capacity development of nurses. I-TECH is in the process of developing a nurse-mentoring program in the ID unit of HUEH, with the ultimate goals of shifting routine tasks from physicians and other multidisciplinary team members to nurses. Additionally, the program aims to motivate nurses to contribute to the full extent of their professional ability. Nurses will be increasingly responsible for:

- Providing HIV and AIDS and ART education and counseling to patients;
- Promoting and documenting drug adherence;
- Staging patients according to World Health Organization (WHO) guidelines;
- Completing simple physical assessments and reporting findings as appropriate; and
- Providing follow-up care to asymptomatic patients.

The goals of the I-TECH nurse mentoring program will be to:

- Increase patient satisfaction by reducing time spent in the waiting room;
- Enhance return appointment compliance rates; and

- Improve ART adherence, to diminish the rate of serious opportunistic infections and ART drug resistance seen at HUEH.

It is envisioned that this program will contribute to the overall national capacity for high-quality HIV care by training HIV advanced-practice nurses for deployment to clinic sites where physicians are simply not available.

Other Clinical Mentoring Program Models in Haiti

University of Miami (UM)/l'Hôpital Universitaire Justinien (HUU)

The University of Miami (UM) supports a family practice residency program for physicians based in the successful family practice outpatient clinic at l'Hôpital Universitaire Justinien (HUU), the main hospital in Cap Haitien in northern Haiti. Since 2004, UM/HUU has provided technical assistance in the North Department to reinforce a referral system between HUU and other clinics and hospitals throughout the network. They provide training to these sites on appropriate referral practices, and facilitate entry-to-care for HIV patients who have been identified through the referral network.

In 2007, UM and HUU began efforts to establish HUU as a regional center of excellence for clinical training in northern Haiti. UM conducted a series of supportive supervision visits at five sites that had recently launched VCT, prevention of mother-to-child transmission of HIV (PMTCT), and HIV palliative care services. Chart reviews and clinical observations were used to identify recommendations for strengthening the HIV-related services at these sites. In 2008, UM will continue supportive supervision visits to these and other sites.

Groupe Haïtien d'Etude du Sarcome de Kaposi et des Infections Opportunistes (GHESKIO)

GHESKIO has five mobile clinical mentoring teams that make regular visits to health facilities in many regions of Haiti. Each mobile team includes at least one physician, one nurse, one pharmacist or phar-

macy technologist, and one laboratory specialist. The GHESKIO teams review charts and observe clinical practice and facilities operations. The mobile teams document their recommendations and review these with the providers and administrators responsible for the site.

Partners in Health (PIH)

Partners in Health (PIH) has provided high-quality health care in central Haiti for more than 10 years. Initially, PIH started working at the Clinic de Bon Esperance in Cange. In partnership with the MSPP, PIH began to revitalize additional clinics and hospitals in other towns in the Central Department. PIH uses a “one-by-one” method in which providers from a new site complete an in-depth preceptorship at a successfully-functioning site. This strategy allows personnel to be mentored by experienced clinicians while also learning how to implement effective patient flow and clinic systems.

