



Makerere University/Yale University (MUYU) Collaboration FIVE YEAR REPORT 2006-2011



*'For improvement in patient care through the enhancement of
medical education and research'*

Table of Contents

- 3 Introduction from the MUYU Co-Directors
- 4 History of MUYU
Objectives and Goals
- 5 The MUYU Experience at Makerere
- 6 A Week In the Life of MUYU
- 7 How Much Time Do MUYU Participants Spend at Mulago?
Chief Residents in Global Health
- 8 Participant Academic Projects
- 9 The MUYU Experience at Yale
- 10 Spotlight on Dr. Fred Okuku
- 11 Additional MUYU Capacity Building
An Administrator's Experience
- 12 Faces of the MUYU Office
Spin-Off Organizations
- 13 The Way Forward: Visions for the Next Five Years
- 14 Closing Thoughts
- 16 Supporting Organizations



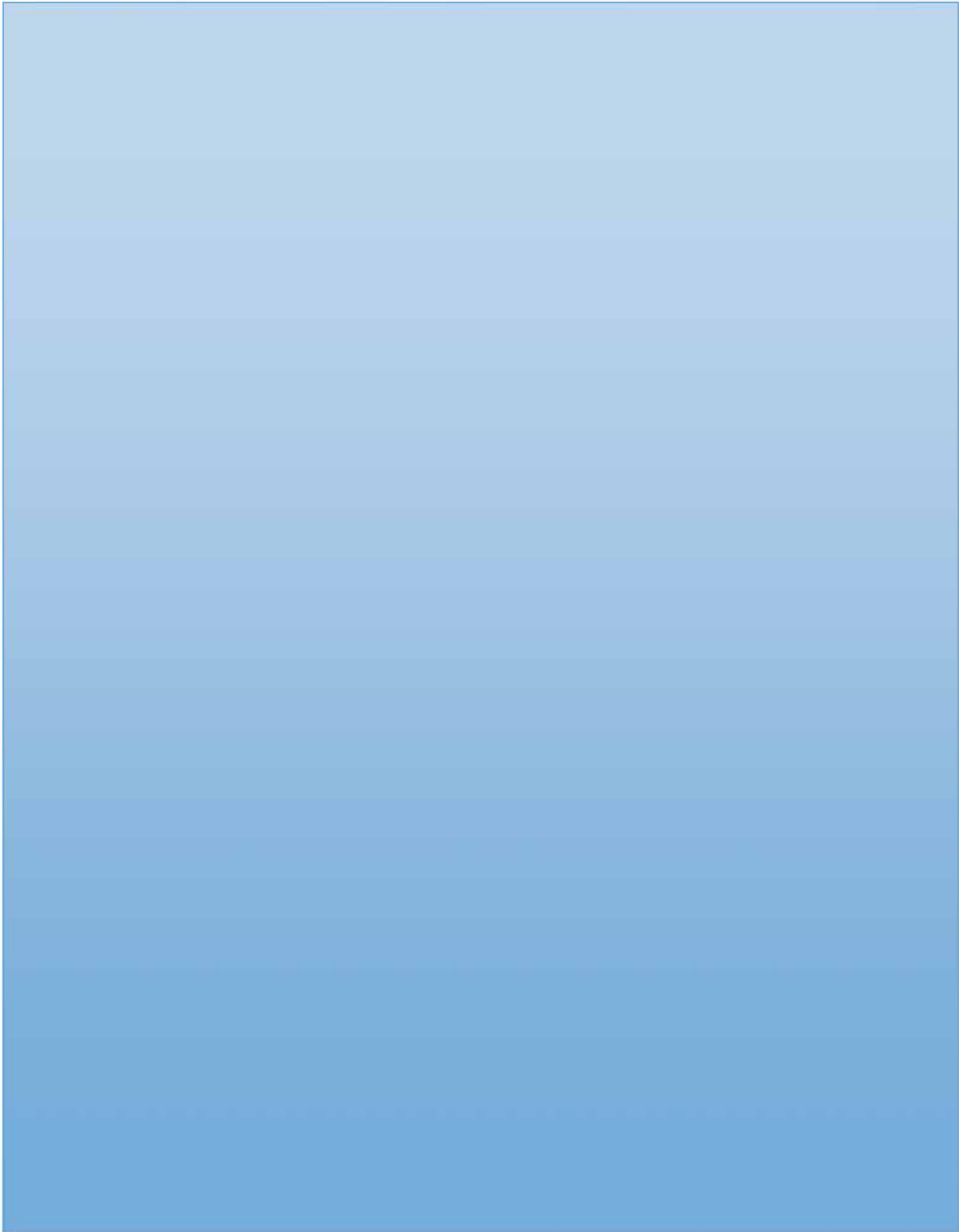
MUYU Office

Makerere University, College of Health Sciences

P.O.Box 7072, Kampala, Uganda

Tel: +256-414-531022

E-mail: muyu.office@yahoo.com



Introduction from the MUYU Co-Directors

It gives us great pleasure to introduce to you the Five Year Report of the Makerere University / Yale University (MUYU) Collaboration. We are excited to note that MUYU has existed for five years -- how time flies, when you are having a good time! MUYU is having a significant impact on medical education both at Makerere and Yale Universities. It has provided opportunities for a two-way exchange of medical students, residents and attending/consultant physicians. MUYU has helped to build capacity in numerous ways, including access to the most up-to-date information at the Albert Cook Medical Library through a collaboration with the Yale Medical Library; enhanced diagnostic and training capacity of Ward 4A's side laboratory; and building breast cancer screening capability by providing two mobile mammography units. Under its guidance and support, the Rainer Arnhold Senior House Officers' Teaching Support project was started to organize and enhance post-graduate medical education and efforts are now underway to strengthen St. Stephen's Hospital, a community hospital in Kampala, as a primary care training site.

The Ugandans who train at Yale gain exposure to a modern, world-class medical center. While our top undergraduate medical students work at Yale for one month, our most promising young physicians train in their area of interest for six to twelve months and return to Uganda with enhanced expertise, fresh ideas, and an infectious excitement to improve our system. Visitors to Mulago Hospital are challenged to attain sharper clinical skills, to perform care in less resourced settings, and build a foundation of cultural competence that will inform their practice in years to come. Additionally, these participants gain an understanding of the social and political milieu framing this patient population and health care providers responsible for their care.

In just five years, MUYU has blossomed! It has evolved into a dynamic program devoted to the enhancement of medical education and capacity building that centers around a nearly continuous bi-directional exchange of talented and dedicated health professionals. What started as a collaboration between two universities has grown to include participants from Stanford University, University of Vermont, Edinburgh University in England, and Kazan State Medical University in Russia, among many others. Here at Makerere, while our work thus far has mainly centered on the Department of Internal Medicine, we continue to explore opportunities for expanding MUYU to collaborate with other departments.

We are glad you are reading this now, and we encourage you to continue reading to obtain a clearer understanding of how this unique collaboration is planned and implemented. We invite you to keep in touch with questions and suggestions for continuous improvement.



Rev. Prof. Sam Luboga
Professor Emeritus,
College of Health Sciences,
Makerere University
MUYU Co-Director



Assoc. Prof. Majid Sadigh,
Department of Medicine
Yale University School of
Medicine
Uganda Site Director,
Office of Global Health
MUYU Co-Director

MUYU Office Staff

MUYU Co-Director: **Reverend Professor Samuel Luboga**
 Director - MUYU Medicine: **Dr. Frederick Nelson Nakwagala**
 Administrator: **Jamidah Nakato**
 Assistant Administrator: **Estherloy Katali Kalyesubula**
 Faculty/Research/Alumni Coordinator: **Susan Nalugo**
 MUYU Collaborations Manager and Yale/Stanford Johnson & Johnson
 Global Health Scholars Program Administrator (Yale): **Laura Crawford**



History of MUYU

The creation of a unique medical education collaboration between two world-class institutions

The concept of an international medical education collaboration was envisioned in 2002 when **Dr. Majid Sadigh** first traveled to Kampala to teach HIV as a lecturer with the Academic Alliance for HIV Prevention and Care. He was struck by the stark contrast between the advanced clinical and epidemiologic research collaborations at Makerere University and the realities of patient care on the Mulago Hospital wards.

MUYU was built over the next four years, as Dr. Sadigh and colleagues at Yale worked

together with their Ugandan counterparts, including **Professors Nelson Sewankambo, Harriet Mayanja-Kizza, and Moses Kamyua**. The common vision was to create a mutually beneficial relationship with the ultimate goal of improving the quality of patient care on the wards of Mulago Hospital.

The first Memorandum of Understanding between the Yale University School of Medicine and the Makerere University Faculty of Medicine was signed in 2006. Now, five

years later, this original vision remains and continues to be fulfilled by the bi-directional exchange of trainees, faculty and staff, as well as improvements in the Mulago Hospital infrastructure. MUYU is made possible by the generous support of a number of organizations (see Back Cover), most notably **Johnson & Johnson**, under the guidance of **Michael Bzdak, PhD, Director of Corporate Contributions**. This report summarizes the accomplishments, ongoing activities, and future goals of this unique collaboration.

Objectives and Goals

1. Enhancement of medical education and training for future physicians at Makerere University.
2. Establishment of a comprehensive training site through continued presence, bilateral exchange, and the development of a medical/social studies curriculum for students and residents from developed countries interested in international health.
3. Provision of essential therapeutic modalities at Mulago Hospital, in addition to improving diagnostic capacity, nursing care and patient care through development and strengthening of human resources, leadership and infrastructure.
4. Development and support of a system of self-deliberation, continuous improvement in the provision of medical training, research and quality health care service.





The MUYU Experience at Makerere

Since 2006, there have been 191 students, residents, faculty, and staff who have completed medical rotations through MUYU at Makerere University/Mulago Hospital (Figure 1). MUYU offers participants a comprehensive experience in global health that extends far beyond the medical wards.

The MUYU collaboration primarily involves the Department of Medicine at Makerere University, though participants have rotated in the Departments of Surgery, Obstetrics and Gynecology, and Pediatrics. At the core of MUYU's philosophy is the dedication to offering participants a comprehensive experience in global health, not just a rotation in infectious diseases. Therefore, the curriculum has grown to include a wide array of non-clinical activities that supplement the clinical training experiences. At Mulago Hospital, participants are typically assigned to two inpatient ward teams, each for three weeks. They are **integrated into the daily activities of their teams** and

participate in all of the enriching academic activities of the Department as well as outpatient clinics. Participants are also expected to engage in bedside and didactic teaching of their Ugandan

clinical care as well as community outreach efforts by going on home visits.

MUYU has organized a **Tropical Medicine lecture series** for

participants. These lectures are given by a dedicated group of Ugandan physicians and enhance participants' understanding of locally endemic diseases. Additionally, weekly **bedside teaching sessions** held by Mulago physicians

provide participants with dedicated time to focus on physical examination and clinical diagnosis skills. Every week, MUYU participants have a **laboratory session** in the Ward 4A Side Lab, taught by Samson Omongot, the lab technician. They get hands-on

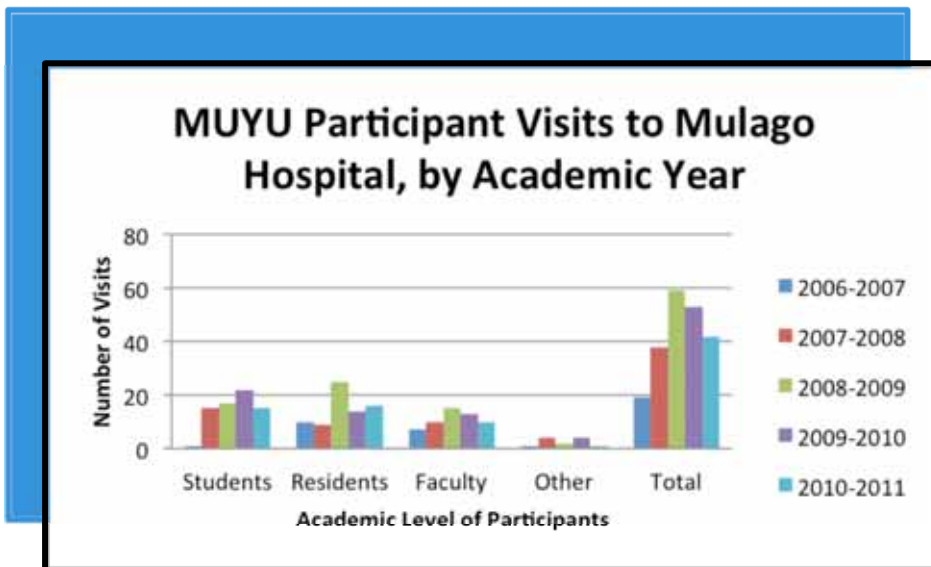


Figure 1

colleagues. Participants who want to experience medical care in a small community hospital can spend one day a week at **St. Stephen's Hospital**. There, they engage with the medical staff in

The MUYU Experience at Makerere (continued)

experience in preparing and analyzing lab specimens and enhance their appreciation of the illnesses afflicting their patients on the wards.

Since MUYU's inception, Susan Nalugo has been teaching Luganda to participants in biweekly **language classes**. Lessons focus on greetings, as well as basic conversational and medical Luganda. Another cornerstone of MUYU has been a series of **sociopolitical lectures**, providing participants with a context for understanding Uganda's history and culture. These lectures are supplemented by **field trips to cultural sites** around Kampala, internally displaced persons camps in Gulu in Northern Uganda, the village of Kasensero on Lake Victoria (where HIV originated), and Rwanda to visit the Genocide memorials.

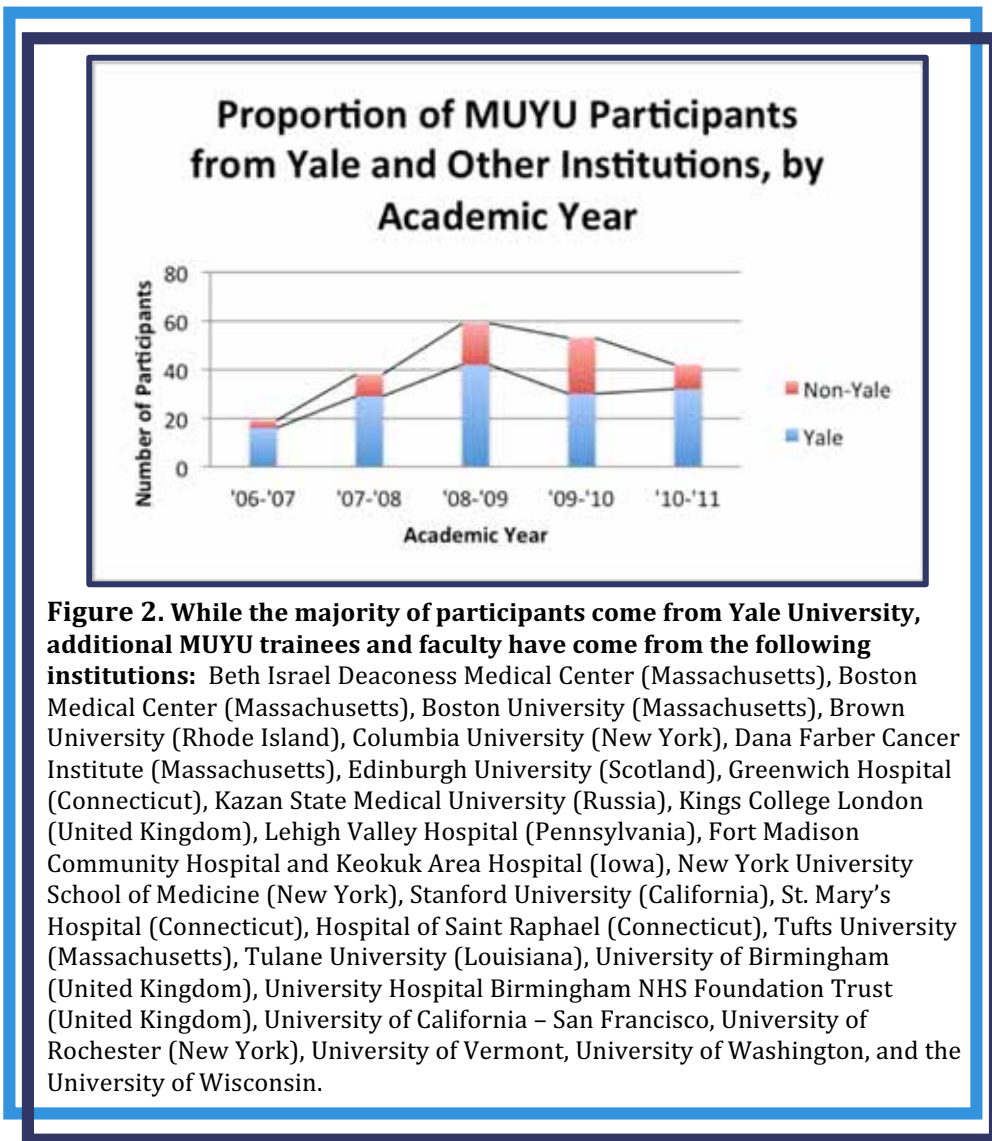


Figure 2. While the majority of participants come from Yale University, additional MUYU trainees and faculty have come from the following institutions: Beth Israel Deaconess Medical Center (Massachusetts), Boston Medical Center (Massachusetts), Boston University (Massachusetts), Brown University (Rhode Island), Columbia University (New York), Dana Farber Cancer Institute (Massachusetts), Edinburgh University (Scotland), Greenwich Hospital (Connecticut), Kazan State Medical University (Russia), Kings College London (United Kingdom), Lehigh Valley Hospital (Pennsylvania), Fort Madison Community Hospital and Keokuk Area Hospital (Iowa), New York University School of Medicine (New York), Stanford University (California), St. Mary's Hospital (Connecticut), Hospital of Saint Raphael (Connecticut), Tufts University (Massachusetts), Tulane University (Louisiana), University of Birmingham (United Kingdom), University Hospital Birmingham NHS Foundation Trust (United Kingdom), University of California – San Francisco, University of Rochester (New York), University of Vermont, University of Washington, and the University of Wisconsin.

Monday	8-9am	Feedback Session with Dr. Frederick Nakwagala
	9am-4pm	Visit to St. Stephen's Community Hospital (including Home Visits)
Tuesday	8-9:30am	Department of Medicine Mini-Rounds
	9:30am-1pm	Ward Rounds or Outpatient Clinics
	1-2pm	Lecture on Diarrheal Disease
	2-4pm	Grand Rounds
	4-5pm	Cultural Discussion Session with Prof. Sam Luboga
Wednesday	9am-1pm	Ward Rounds or Outpatient Clinics
	1-2pm	4A Side Lab Teaching Session
	2-3pm	Lecture on Trypanosomiasis
Thursday	8-9am	Department of Medicine Journal Club
	9am-1pm	Ward Rounds or Outpatient Clinics
	1-2pm	Bedside Clinical Teaching Session
	2-3pm	Luganda Language Lesson
Friday	9am-12pm	Ward Rounds or Outpatient Clinics
	12-1pm	Post-Mortem Rounds (Department of Medicine/Department of Pathology)
	3-4pm	Luganda Language Lesson

A Week in the Life of MUYU

How Much Time Do MUYU Participants Spend in Uganda?

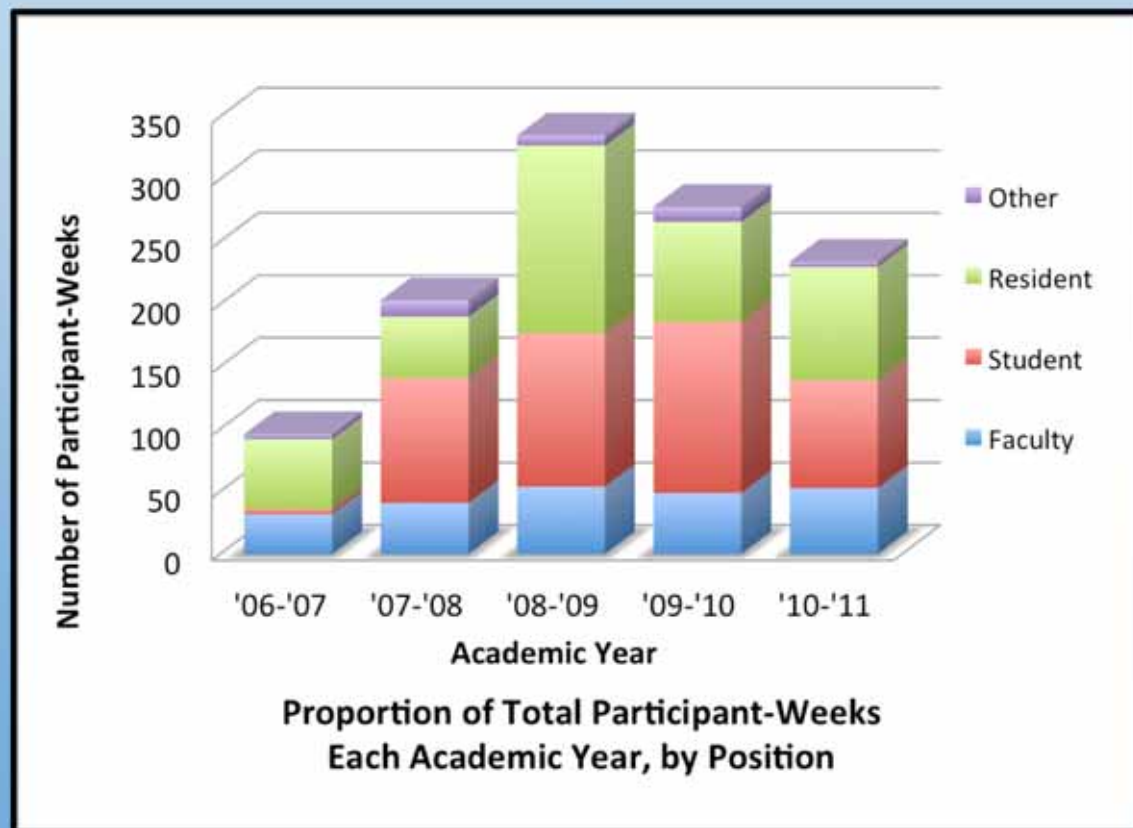


Figure 3. During MUYU's first five years, 191 participants have worked in Uganda. There have been 211 distinct visits (40% of which were funded by **Johnson & Johnson**), totaling 1146 weeks. Faculty participants spent an average of 4.2 weeks per visit, while student visits averaged 6.4 weeks, residents averaged 5.8 weeks, and support staff visited for an average of 3.4 weeks. While these numbers are averaged over the five-year period, the duration of individual participants' experiences has varied. For instance, student visits have ranged from 4 to 13 weeks, while individual faculty have dedicated anywhere from 1 to 18 weeks at a time.

Global Health Chief Residents Come to MUYU

Every year, the Yale Department of Internal Medicine selects 8 graduating trainees from its three residency programs to serve as Chief Residents for the next academic year. Chief Residents support the residency programs by dedicating this year to clinical teaching, patient care, and administrative responsibilities. In the 2010-2011 academic year, two additional residents from the Yale Combined Internal Medicine-Pediatrics Residency Program were asked to serve in new positions as Global Health Chief Residents. **Drs. Tracy Rabin and Jeremy Schwartz** split their year between New Haven and Kampala, spending five months teaching and working clinically at Mulago Hospital and providing administrative support to MUYU.

"Both of us had spent time working at Mulago in the past - as medical students and again as MUYU participants during our residencies. We really respect the MUYU vision of developing a bi-directional collaboration that is focused on medical education and capacity building, so when the chance arose to return to Uganda in these new roles, we enthusiastically accepted it! We were warmly welcomed as visiting faculty in the Department of Internal Medicine and each took the opportunity to work side-by-side with Ugandan physicians whom we had come to know, admire, and trust during the time they spent as MUYU Clinical Fellows at Yale - **Dr. Robert Kalyesubula** (2009-2010, Nephrology) and **Dr. Jane Nakibuuka** (2009-2010, Critical Care). As physicians trained in a major U.S. academic medical center, working on the wards at Mulago provided emotional and intellectual challenges on a daily basis. Additionally, we each were inspired by and learned so much from our work with Ugandan medical students and residents, as well as MUYU participants visiting Mulago. The MUYU staff kept us very busy as well, and their friendship and warm smiles brightened even our most trying days."



MUYU Participant Academic Projects

In addition to their clinical experiences, MUYU participants over the past five years have engaged in thoughtful reflection and academic projects. A number of these endeavors have led to publications in major journals and presentations at international conferences. The following is a sampling of their work:

Publications

- **Al-Samarrai T.** Adrift in Africa: A US Medical Resident on an Elective Abroad. *Health Affairs*. 2011; 30(3):525-528.
- **Arwady MA.** Collaterals. *JAMA*. 2010; 303(22):2229-2230.
- Barrantes F, Zorzanello MM, **Kalyesubula R**, and Brewster UC. An Unusual Case of Anterior Abdominal Mass Following Peritoneal Dialysis Catheter Insertion. *Seminars in Dialysis*. 2010; 23(5):520-1.
- **Graber LK**, Asher D, Anandaraja N, Bopp RF, Merrill K, Cullen MR, **Luboga S**, and Trasande L. Childhood Lead Exposure After the Phaseout of Leaded Gasoline: An Ecological Study of School-Age Children in Kampala, Uganda. *Environmental Health Perspectives*. 2010; 118(6): 884-889.
- Haq C, Lukolyo H, **Graber LK**, Elansary M, **Khoshnood K** and **Rastegar A**. With So Much Need, Where Do I Serve? *American Medical Association Journal of Ethics*. 2010; 12(3): 149-158.
- **Kalyesubula R** and Perazella M. HIV-related Drug Nephrotoxicity in Sub-Saharan Africa. *The Internet Journal of Nephrology*. 2010; 6 (1).
- Papeta N, Sterken R, Kiryluk K, **Kalyesubula R**, and Gharavi AG. The Molecular Pathogenesis of HIV-1 Associated Nephropathy: Recent Advances. *Journal of Molecular Medicine*. 2011 January 11.
- **Provenzano AM**, **Graber LK**, Elansary M, **Khoshnood K**, **Rastegar A**, and Barry M. Short-Term Global Health Research Projects by US Medical Students: Ethical Challenges for Partnerships. *American Journal of Tropical Medicine & Hygiene*. 2010; 83(2): 211–214.
- **Sico J.** Serving International Neurology from Uganda. *Neurology Today*. 2010; 10(8): 4.
- Nguyen HQ, **Okuku F**, Ssewankambo F, Magaret AS, Johnston C, Wald A, Kambugu A, Corey L, Orem J, Casper C. AIDS-associated Kaposi sarcoma in Uganda: response to treatment with highly active antiretroviral therapy and chemotherapy. *Infectious Agents and Cancer*. 2009; 4(Suppl 2):05
- **Kaddu-Mukasa M**, Ssehasanvu E, Ddumba E, Thomas D, Katabira ET. Rheumatic manifestations among HIV positive adults attending the infectious disease clinic at Mulago Hospital. *African Health Sciences*. 2011; 11(1):24-29.

Poster Presentations

- Barrantes F, **Kalyesubula R**, Arvelakis A, Lettieri D, Asch W, Bia M, Formica R, and Kulkarni S. Single-day Work Up Protocols Is Associated With A Shorter Time To Kidney Transplant: The Yale New Haven Transplant Center Experience. *National Kidney Foundation Spring Clinical Meetings (San Francisco, USA)*, 2010.
- **Bigelow J**, **Sico J**, and Katabira E. Perceptions of Epilepsy at Mulago Hospital in Kampala, Uganda. *American Academy of Neurology Annual Meeting*, April 2010.
- **Sico J**, **Bigelow J**, Kimuli I, Katabira E, Patwa H. Incidence of Stroke and Its Stroke-Related Mortality At Mulago Hospital, Uganda. *American Academy of Neurology Annual Meeting*, April 2010.

Additional Projects

- **Gamble S** and **Kayima J.** The Use of Anticoagulation In Rheumatic Atrial Fibrillation In Uganda. 2010.
- **Khorrani H**, Magriples U, Galerneau F, and Namagembe I. Teaching Basic Ultrasound Skills at Mulago Hospital, Kampala, Uganda. 2010.
- **Liliya Y**, **Luzige S** and **Nakwagala FN.** Evaluation of Population Awareness of Diagnostics and Treatment of TB. 2010.
- **Peek K** and Bakeera-Kitaka S. HIV Positive Adolescents' Experiences With and Attitudes Towards Disclosure. 2010.
- **Provenzano AM.** 'This Open Sore of the World' - The Legacy of Dr. David Livingstone, the First Physician Missionary:Hero and Adventurer. (Thesis Submitted to the Yale University School of Medicine in Partial Fulfillment of the Requirements for the Degree of Doctor of Medicine.) 2010.



The MUYU Experience at Yale

Since 2007, there have been over 20 faculty, residents, and medical students from Makerere University/Mulago Hospital (Figures 4 & 5) who have participated in an array of training opportunities at the Yale University School of Medicine and its affiliated teaching hospitals.

Central to the MUYU collaboration is the mandate for a bi-directional educational exchange. As a result, select Ugandan medical professionals (including faculty, residents, and medical students) are chosen each year to come to

Connecticut for additional training. The selection of **medical students** (4 per year) is based upon academic performance. Candidates are then reviewed by the office of the Dean of the Makerere University School of Medicine. The Yale School of Medicine covers the cost of their four-week rotations at Yale-New Haven hospital (including pre-departure preparations, and all travel and living expenses).

During these rotations, the

Ugandan students are partnered with 3rd and 4th year Yale medical students and participate in didactic teaching sessions and clinical work alongside their colleagues.

To address the dearth of sub-

Department of Internal Medicine, assisted by senior consultant physicians and professors from the Department. These all-expense-paid clinical fellowship training periods range from 6 to 12 months in length. In addition to sub-

specialty education, these experiences provide opportunities for trainees to develop research projects, reflect on career and personal goals, and establish long-term mentorship relationships, without the pressures of clinical responsibilities.

Upon returning to

Uganda, trainees assume additional clinical and leadership responsibilities within their sub-specialties and have used their newly acquired skills and perspectives to enhance education, research, and patient-centered care.

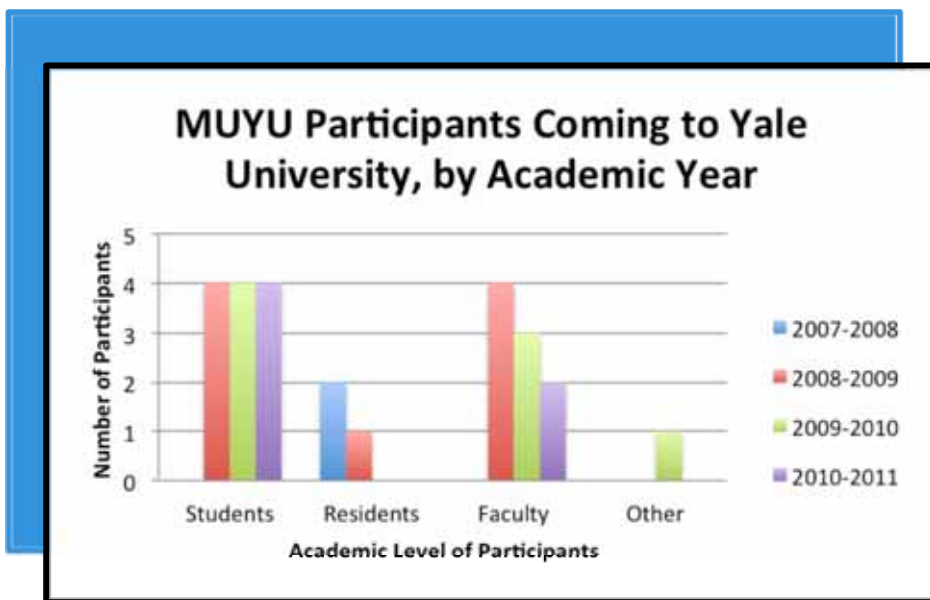


Figure 4

specialty training opportunities available in Uganda, **junior physicians** are chosen to come to Yale for training each year. Selections are made by the Chair of the Makerere University

Additionally, they serve as mentors, lecturers, collaborators, and supervisors to MUYU participants at Mulago. Given their experiences at Yale, they are ideally positioned to serve as medical-cultural ambassadors. MUYU has facilitated sub-specialist training in the areas of **Pulmonology, Rheumatology, Cardiology, Endocrinology, Oncology, HIV care, Nephrology, Critical Care, Gastroenterology, and Emergency Medicine.** Given the global trend toward the increasing prevalence of non-communicable diseases in resource-limited settings, this focus on enhancing sub-specialty training at the faculty level is both critical and timely.

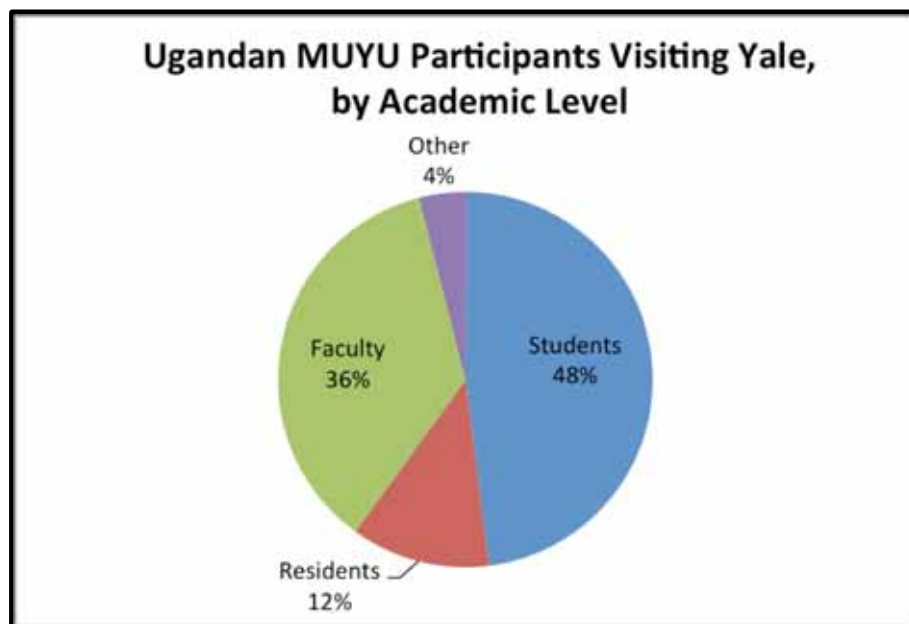


Figure 5. By the end of June 2011, 25 MUYU participants from Uganda will have trained in some capacity at Yale University and its affiliated teaching hospitals for a total of 488 weeks. These include 12 medical students, 3 residents (Senior House Officers [SHOs]), 9 faculty members, and 1 staff person.

Spotlight on Dr. Fred Okuku MUYU Clinical Fellow (2008, Oncology)

Excerpted from an interview held at the Uganda Cancer Institute, March 22, 2011

“I started my masters degree in Internal Medicine in 2006. It was at that time that MUYU was getting off the ground and the first Yale residents and students came to Mulago Hospital. I interacted a lot with them, both professionally and socially. I held clinical teaching sessions and lectures on topics I knew well. They did the same with topics we learn less well. I had been interested in Oncology for some time and had the privilege of working closely with Dr. Kenneth Miller (Yale Oncology) during his three weeks at Mulago around the same time. In 2008, the opportunity arose for me to spend six months at Yale training in Oncology.



It was a big sacrifice to go as a senior house officer- the semester kept going while I was away and I had quite a bit of catching up to do when I returned home. But while at Yale I got involved with all aspects of training and patient care in Oncology. I worked with the oncologists in clinic and in the hospital; I learned how the radiologists read mammograms; I went to all the Tumor Boards and fellows conferences; I followed Dr. Miller on consultations to smaller community hospitals. There are some things that you can be taught but there are some things that you need to see to have them change your life! I was amazed at the level of professionalism, the dedication to each patient, the resources put into every aspect of patient care. I even interacted a lot with Yale medical students. I noted that their interactions with attending physicians were collegial and non-threatening. I thought that their level of knowledge was great.

Coming to Yale gave me a foundation for my career and when I returned to Uganda I was truly a changed man. I was humbled by the cross-cultural experience and by the sheer amount of knowledge out there. I struggled with how to integrate myself into this system without getting lost and confused. Our system is broken down and the patients are disenfranchised. Rebuilding our system is going to take a lot of work! After finishing my masters, the opportunity arose for me to train in Oncology for a year at the University of Washington. It was so much easier to navigate that system because of my experience at Yale. My colleagues there found that I had a solid foundation and a lot of knowledge and they wondered how that was. ‘I went to Yale,’ I would tell them proudly.”

Additional MUYU Capacity Building

Library and Informatics

Internet connectivity and skills are increasingly required to access the most up-to-date medical information. **Yale University medical librarian Mark Gentry** has spent four weeks at the Makerere University Sir Albert Cook Medical Library teaching informatics to librarians, faculty, and students. He focused on searching the medical literature and using citation management software. He also created a web page to facilitate access to frequently used library resources, thereby reducing strain on limited internet bandwidth. To assist MUYU participants, he created an easy-to-use CD-ROM for use prior to and during their visit to Uganda. This includes clinical resources related to tropical medicine, Luganda language lesson audio-files recorded by MUYU staff, and introductory information about Uganda.

Ward 4A Lab Enhancement

Every medical ward at Mulago Hospital has a side laboratory that is used for both patient care and teaching. Annually, the Ward 4A side lab (which serves the Infectious Diseases and Gastroenterology units) has received \$10,000 through MUYU, specifically via support from **Johnson & Johnson**. These funds support the work of **laboratory technician Samson Omongot** and have led to a significant expansion in the diagnostic and educational capabilities of the laboratory. Specifically, the menu of point-of-care tests has quintupled and the turnaround time has been dramatically reduced.



Mobile Mammography

In 2007, visiting **Yale oncologist Dr. Kenneth Miller** conducted a needs assessment in conjunction with the Uganda Cancer Institute (UCI), which revealed that nearly all women with breast cancer presented for diagnosis and treatment at very advanced stages of disease. Upon returning to Yale, he arranged for the purchase,



refurbishment, and transport of a retired mammography van. This is now part of the UCI Comprehensive Community Cancer Screening Program, whose activities include outreach programs and breast and cervical cancer screening. The success of this program has led to the donation of a second mobile unit.

An Administrator's Experience

In 2010, MUYU Collaborations Manager, Laura Crawford, visited Uganda for the first time. The following are excerpted from her reflections...

My recollections include hearing the laughter and lilting tones of the MUYU staff as they make African tea in the crowded office; noting Samson's pride in his small lab on 4A; seeing the Ugandan faculty who had come through my Yale office humbly needing help with ID badges and reimbursements in past years and

are now recognized leaders at home; meeting the children of Barbara [Kakande] and Jane [Nakibuuka] – far away in New Haven for the year – and absorbing their hugs to pass back to their mummies; walking on the roads – potholed, diesel-fumed, vibrating with energy – between the University and the Hospital; helplessly observing the worried family members resting on the tiled floors outside the wards.

I am grateful for this trip; I have seen my program in action and J&J dollars

at work, I have made friends with the people behind the email exchanges and seen them in their home setting, and seen firsthand the challenges they face, which infuses me with more energy to work on how to work together to confront those challenges.

I see the respectful weaving, the warp and the weft, of a true collaboration, with the overlapping of two large institutions and cultures, and I am honored to be a part of it.

Faces of the MUYU Office



Ms. Jamidah Nakato
MUYU Administrator



Mrs. Estherloy Katali Kalyesubula
MUYU Assistant Administrator



Ms. Susan Nalugo
MUYU Faculty,
Research, and Alumni
Coordinator

Spin-Off Organizations

RASHOTS

The Rainer Arnhold Senior House Officers' Teaching Support (RASHOTS) was established in 2010 to support postgraduate trainees in the Makerere University Department of Internal Medicine. This unique organization is supported by The Mulago Foundation under the leadership of Managing Director, **Kevin Starr, MD**. Co-Director of the Yale/Stanford Johnson & Johnson Global Health Scholars Program and Senior Associate Dean for Global Health at Stanford University, **Michele Barry, MD**, was instrumental in making sure this project came to fruition. It has three specific aims:

1. To improve the well being and satisfaction of Senior House Officers during their training years;
2. To improve the level of competence of SHOs in patient care and teaching;
3. To improve the level of competence of SHOs in administration and research.



Headed by **Site Director Professor Majid Kagimu** and **Deputy Director Dr. Robert Kalyesubula**, RASHOTS has brought a new level of organization to postgraduate training at Mulago Hospital. In the near

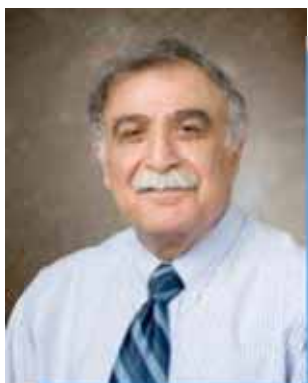
future RASHOTS plans to create a Chief Resident position. This will allow one exceptional trainee to dedicate the year following completion of his/her master's degree to medical education and administrative support of the post-graduate training program.

The Caring Hands Foundation

Motivated by his experience as a MUYU participant in 2008, **Dr. Charles Holt** (Family and Emergency Medicine, Mercy Medical Center in Clinton, Iowa) started The Caring Hands Foundation. On the Mulago Hospital campus, this organization works closely with the Department of Social Work to address the unmet medical and social needs of the most destitute and at-risk patients. Outside Mulago Hospital, The Caring Hands Foundation is in the process of constructing and supporting a primary school and orphanage (Hope of Life) in Kasensero in southwestern Uganda as well as providing educational support to a number of students in the village. The photo below was taken during the groundbreaking ceremony.



The Way Forward: Visions for the Next Five Years



Professor Asghar Rastegar
Director,
Office of Global Health
Department of Medicine
Yale University School of Medicine

On reflecting upon these first five years of the MUYU Collaboration, we are struck by the form that this program has taken in such a short period of time. Not only has there been rapid growth, but small buds have been burgeoning from its roots that have lent an entirely unique shape to its objectives and achievements. This transformation has been possible due to the boundless energy invested by the program participants, and the vision and direction of the leadership primarily at Makerere University.

For the ensuing years of this collaboration, several challenges must be faced. First, it is imperative that future goals continue to center on matching needs with available skills and resource. In this way, we can ensure that our energy and resources are well utilized, without redundancy, and that needs are addressed appropriately and realistically. In our efforts to improve clinical outcomes and to preserve the dignity of patients, we must enhance our presence at Mulago Hospital with greater dedication to nursing care. Given that no undergraduate training in nursing exists at Yale, we must turn to another institution with whom we can ally in these efforts. Along the theme of clinical training, we must also examine our goal of training Ugandan colleagues at Yale, and how we can better accomplish this goal despite state mandated restrictions on the clinical role of international graduates. Along with our commitment to improving clinical care comes the responsibility to invest in research that can inform our care of patients. While steps have been taken in this direction, we must play a larger, more prominent role in designing and implementing research projects that can respond to the unique needs of the patient population at Mulago.



Professor Harriet Mayanja-Kizza
Dean, School of Medicine
College of Health Sciences
Makerere University

As the MUYU collaboration grows ever-stronger roots, it may be time to involve sites in innovative ways. Building capacity, for instance by training in specific procedures, mandates access to patients. This requirement may be met in other settings where there are numerous specialists and an abundance of equipment. Additionally, the teaching capabilities of Ugandan faculty could be effectively utilized to enhance the capacity of local faculty in nearby countries, such as Rwanda. There are endless ways to imagine a “triangle of exchange,” whereby we can build on strengths of participating sites while filling in identified gaps.

We must begin to view Mulago and Makerere within the larger cultural and geographical framework of the region and the continent. Given the considerable wealth of knowledge and outstanding scholarship possessed by the faculty of Makerere, the university and medical campus can serve as an educational nexus for many of Uganda’s neighbors. We should strive to strengthen this mission.

To identify individuals with potential to flourish in international clinical settings and complement rather than compromise or deplete local resources, we must seek those who are aware that their sole responsibility is to be open to learning, who are flexible, and who can offer help creatively in sustainable and meaningful ways when opportunities arise. It is these individuals who have the cultural sensitivity, humility and compassion critical to a successful experience.

Finally, we must find a way to collect and utilize the momentum that has built amongst the participants of the MUYU program. Their experience is a singular one and many participants return to their lives reenergized, with a perspective they may not have anticipated and which colors their future endeavors. One wonders how to channel this energy to form a dynamic community that moves as the program moves, and remains bound to those whose lives have been connected through the patients at Mulago.

The Way Forward: Visions for the Next Five Years (cont'd)

Excerpted from an Interview with Dr. Frederick Nelson Nakwagala



Dr. Frederick Nelson Nakwagala
Clinical Head, Directorate of
Medicine, Mulago Hospital
Site Director, MUYU Medicine
MUYU Clinical Fellow (2009,
Endocrinology)

“The demand for this kind of collaboration I think is so great. Whereas it has been the tradition for collaborators to come and go, MUYU has become a continuing program and that is gold. Initially, in 2006, it looked like Yale was going to focus on ID - Ward 4A - but over time the global health concept has become broader in scope and a community has developed, bridging the Yale and Makerere Departments of Medicine.

Five years from now I envision a MUYU that has grown in departmental scope and organization, beyond Medicine. I see MUYU in all departments and even at other universities and hospitals. I see an increase in trans-Atlantic traffic in both directions. I also see other universities coming on board to partake in our long-standing program; we have the boots on the ground.

I also see MUYU fanning out to encompass wider concepts of health, more than simply what you see at the patient’s bedside. I see MUYU going right into the communities to try to understand the ethical, social, and cultural factors that influence disease. And I see MUYU bringing in partners from non-clinical disciplines – particularly in the social sciences. How do you manage health care systems? How do you prepare policies? I think we need to start delving into these complex questions.”

Closing Thoughts:

Excerpted from an Interview with Professor Nelson Sewankambo

“In the last fifteen years, I have not seen a collaboration grow as fast as MUYU has - not only among faculty, but also among trainees. Of all the Yale Department of Medicine collaborations, MUYU receives the most applications every year. I ask myself why that is, given the shortcomings we have here. But it is a testament to the dedication of the team members here and at Yale, who are always striving to improve the experience on both sides. From our perspective, the fact that there is a Yale presence throughout the academic year has greatly contributed to the program. For our people to be interacting with Yale people all the time - this makes a big difference. When MUYU started, we never envisioned that many Ugandans would be going to Yale for subspecialty training. But that has come to be and it has improved our human resources and hopefully will positively impact the retention of doctors and faculty in the long term. The fact that MUYU has such a strong, capable management structure on the ground here is truly a testament to the collaboration’s success.

Over the next five years MUYU needs to consolidate its achievements. We need to work on improving the capabilities of multiple hospital wards, which will inspire other units to follow suit. The Ugandan doctors who travel to Yale are limited in the degree of hands-on patient care they can perform. Improving that aspect will strengthen their training experiences. What started as a Department-to-Department collaboration can have a broad impact beyond those entities. At the end of their training, if the Ugandan medical students and SHOs are used to a different way of doing things after being exposed to so many visitors from Yale and after training at Yale themselves, I believe that the impact will be felt all around Uganda.”



Prof. Nelson Sewankambo
Principal,
College of Health Sciences
Makerere University

MUYU would like to thank the following people for their significant contributions over the past five years:

Makerere University/Mulago Hospital Faculty and Staff

Professor Moses Kanya - Head, MU Department of Internal Medicine
Dr. Robert Kalyesubula - Former MUYU Education Director (2006-2009)
Dr. Simon Luzige - Former MUYU Education Director (2009-2010)
Dr. Kenneth Opio - Former MUYU Site Director (2006-2010)
Dr. Anthony Musingo - Head, St. Mary's Hospital Lacor-Department of Medicine
Ann Byekwaso Bakyawa - Former MUYU Administrator
Dr. Edward Ddumba - Former Executive Director, Mulago Hospital
Dr. Stephen Kijjambu - Former Dean, MU School of Medicine
Professor Elly Katabira - Former Deputy Dean for Research, MU School of Medicine
Professor Sarah Kiguli - Head, MU Department of Pediatrics and Child Health
Dr. Mhoira Leng - Head, MU Palliative Care Unit

The staff of Mulago Hospital
The staff of St. Stephen's Hospital Mpererwe
The staff of St. Mary's Hospital Lacor
The faculty and staff of the Yale University School of Medicine and its affiliated hospitals



The Makerere University/Yale University (MUYU) Collaboration would like to thank the following generous supporters:



Makerere University College of Health Sciences

Mulago Hospital

Yale University School of Medicine and Yale-New Haven Hospital

Waterbury Hospital

The Gilead Foundation

Provides funding for MUYU staff support, and medical student rotations, supervision, lectures, and activities.

Johnson & Johnson

Provides funds for selected residents and faculty from Yale, Stanford and other institutions to rotate at Mulago Hospital. Also supports the Ward 4A lab and staff, MUYU administration, and visiting faculty from Makerere University to Yale.

The Mulago Foundation

Yale/Stanford Johnson & Johnson Global Health Scholars Program

The Yale-Mulago Medical Fellowship Corporation

Established by the family of Dr. Jock Lawrason to provide the opportunity for selected Ugandan physicians to come to Yale University and its affiliated hospitals for 6-12 month rotations to develop specific skills and knowledge relevant to the care of patients in Uganda.

And the many anonymous donors who donated time and/or funds to make this project a reality!

