

Basic Surgical Skills Course, Kigali, Rwanda

Michelle Murray

In February 2014, Dr. Brock Vair, Dr. David Amirault and I traveled to Kigali, Rwanda to assist in a Basic Surgical Skills Course. The course was identified as a need for first year surgery residents by Dr. Georges Ntakiyiruta, Head of the Department of Surgery, University of Rwanda. However due to a lack of funding, they were unable to run the two day course without the support of Dalhousie University surgeons who volunteered to teach the course and brought donated, essential materials.

The course took place February 5th and 6th and was lead by Drs. Vair and Amirault with two senior surgery residents from Rwanda, Drs. Christian and Lando. The course involved a wide range of skills from aseptic technique, theatre safety, bowel anastomosis, vein patches, tendon repair and chest tube insertion to orthopedic management of fractures. Dr. Vair stated that:

"From the beginning of the Skills Course it became evident that the Junior Resident group was significantly deficient in basic suturing, knot tying and dissection. We agreed that the most important and pressing need within their training program was improving education rather than providing a service by seeing patients and performing surgery. Future initiatives in Rwanda should emphasize basic clinical and operative teaching with the development of an appropriate curriculum within both areas of learning."

The course was conducted at the Faculty of Medicine Simulation and Skills Centre (FOMSSC) on the campus of the University Teaching Hospital of Kigali. Angelique Mugirente is the nurse coordinator who runs the centre; she and Michelle Murray were responsible for coordinating and running the Basic Surgical Skills course.

As an illustration of the need for surgical education in Rwanda and to put things in perspective, at present there is only one surgeon for every 250, 000 people in Rwanda compared to 80 surgeons for every 250, 000 people in Nova Scotia. There are 945,000 people in Nova Scotia. Rwanda is half the geographical size of Nova Scotia and has 11.7 million people.

To read the full article, please visit the Global Surgery Office website: <http://globalsurgeryoffice.medicine.dal.ca/rwanda.htm#Top>.



Dr. Amirault and Angelique Mugirente with University of Rwanda surgery residents



University of Rwanda surgery residents with Drs. Vair (far left) and Amirault (fourth in from the right) and Michelle Murray (centre)

Bethune Round Table 2014

Lisa Nardecchia

McMaster University in Hamilton, Ontario will be hosting this year's Bethune Round Table conference from June 5-8.

Named for Norman Bethune, one of Canada's most well-known international surgeons, the Bethune Round Table brings together health care professionals and surgical care leaders with a passion and drive to help improve surgical care issues faced by low-income countries. The conference provides the opportunity for participants from around the globe to collectively discuss challenges to safe surgical care and determine solutions that are appropriate and feasible in low-resource settings.

Among the Keynote Speakers this year are: **Dr. James Orbinski** OC, Research Chair in Global Health at the Balsillie School of International Affairs, Professor of Medicine at Dalla Lana School of Public Health in Toronto, Co-Founder/Scientific Advisor to Dignitas International; **Dr. Vivienne Mitchell-Amata**, Chair of the Guyana Medical Council, Consultant Anaesthetist at Georgetown Public Hospital Corporation, Faculty of the Institute for Health Sciences Education, Guyana; **Dr. Leland Albright**, Pediatric Neurosurgeon, BethanyKids at Kijabe Hospital, Kenya and former Chief of Pediatric Neurosurgery at the University of Pittsburgh.

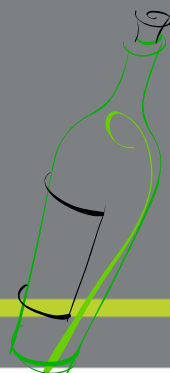
For more information on this year's Bethune Round Table and to register, please visit: <http://fhs.mcmaster.ca/surgery/isd/brt2014.html>.

Thank you!

Thank you to everyone who participated in the GSO Global Health Engagement Survey.

The information collected will be used to support current and future global health initiatives within the department.

Please join us in congratulating Dr. John Armstrong, winner of the bottle of wine!



Report from the Field: Rwanda

Gavin Tansley

Although February is a fantastic month to walk through the front door of the Halifax Stanfield International Airport holding a ticket to Rwanda, I knew a week wasn't going to allow much time to take in all the sights featured in "Gorillas in the Mist". The GSO's partnership with the University of Rwanda has continued to flourish. We have developed an enormous respect for the faculty and residents in Kigali, and the anticipation of meeting them all for myself, was a privilege that made the trip feel much further than the five time zones my journey ultimately crossed.

Partnerships, especially in international health, are not always beneficial. Without meticulous planning and evaluation, resources may be wasted on bad projects cloaked by good intentions. The GSO believes strongly that our agenda of improving education through simulation-based education is an approach that will promote safer surgical care in resource limited settings, but in all honesty, we have no idea if we're right. Surgical simulation has become a widespread and effective means of teaching residents in North America, but with a drastically different system of training, a higher case volume, and no experience with simulation models, lower income countries represent a drastically different learning environment. It was my job to see if we were making a difference in Rwanda, or simply entertaining ourselves.

Over the following week I began recording Rwandan residents as they completed a surgical task on a simulation model. Thanks to the visionary leadership of their program director, every resident made themselves available to participate. We recorded each resident before and after a skills session designed to teach the correct technique for the task being tested. Staff surgeons in Rwanda and Canada will ultimately evaluate each video recording. The hope is that we will be able to determine if simulation assists in the learning and retention of a surgical skill in resource-limited settings. These methods have been repeated in Canada (thank you to everyone who participated!) to allow us to make comparisons between how residents learn in these very different settings.

This short trip is a first step towards the addition of an important piece to the medical education literature. Now that the data collection phase of the project is drawing to a close, we will soon begin the task of analyzing the data. There will ultimately be over 90 video clips to evaluate before we are through, making me regret not writing popcorn expenditures into our budget.



Above: Dr. Georges and Dr. Tansley



Below: Dr. Tansley and a resident

Dodoma-Dalhousie Partnership

Greg Knapp

The United Republic of Tanzania has one of the lowest rates of physicians per capita in Sub-Saharan Africa, with a national average of 3.5 per 100,000. However, this masks significant regional variability. Over half of the 1,339 physicians registered with the Ministry of Health practice in Dar es Salaam. Of those physicians, only 110 are registered as surgeons, 1/3 of which are in administration. In the capital city of Dodoma there are just 2 General Surgeons serving a catchment area of several million.

To address the critical health workforce shortage, the country has 2 public and 4 private medical schools. The University of Dodoma is the newest public post-secondary institution, established in 2007. The University's College of Health Sciences had its first intake of medical students in 2009 and will graduate its first cohort of physician in the spring of 2014. The first intake of General Surgery residents commenced training in September 2013. The University has 3 teaching hospitals, including Dodoma Regional Hospital. However, surgical education is primarily taught by non-surgeons and basic surgical technique is acquired in a non-structured environment during clinical rotations.



With over 400 students across 5 years of medical education and 2 new post-graduate trainees in General Surgery, a major barrier to surgical education is access to specialist surgical instructors and clinical preceptors. While the University has a beautiful laboratory space for simulation and skill learning, the paucity of physical resources (i.e. models, equipment, suture), formalized curriculum and appropriate surgical mentorship precludes effective, high quality surgical education.



In January, a small delegation from the Global Surgery Office visited Dodoma and met with key stakeholders from the University Administration and College of Health Sciences. A Memorandum of Understanding was drafted and signed in Tanzania and subsequently ratified by both institutions. There is a mutual awareness of the benefit international partnership can provide to learners, instructors and researchers. Moving forward, The Global Surgery Office is working with Dodoma's College of Health Sciences to establish tele-simulation capabilities and supplementary didactic content delivery for the undergraduate and post-graduate students. Opportunities for electronic mentorship are being explored, while research into the out-of-pocket cost of emergency surgical intervention is underway.

For more details, please see the Global Surgery Office website:
<http://globalsurgeryoffice.medicine.dal.ca/tanzania.htm>

LEARN MORE ABOUT THE GSO:
[HTTP://GLOBALSURGERYOFFICE.MEDICINE.DAL.CA](http://globalsurgeryoffice.medicine.dal.ca)

HELP BUILD CAPACITY FOR OPERATING ROOM NURSING IN RWANDA

The Need:

Dalhousie University anesthesiologists and surgeons are making a substantial contribution to medical education in Rwanda but operating room nurses have been left behind. OR nurses in Rwanda receive no special training; they are unfamiliar with instruments and aseptic technique. Breaches of sterility lead to the many cases of post-operative sepsis and wound infection found in Rwanda. There is a dire need for OR nurse education.



The Plan:

- Develop a two-week course of essential OR nursing skills (e.g. gowning and gloving, sterile technique, instrumentation, team collaboration, etc.)
- Select nurses with leadership potential to attend the course
- Deliver the course at the Rwandan simulation and skills centre using active hands-on learning
- Empower course graduates to run training courses for other OR nurses

The course will be developed and delivered by Michelle Murray (Coordinator, Skills Centre, Health Sciences), Jocelyne Granger (Faculty, Perioperative Nursing Program at the Registered Nurses Professional Development Centre) and Rosie Borey (an Australian OR nurse currently working in Rwanda). We estimate that \$10,000 will be required to fund travel for the nurse educators and to run the course in Rwanda.



How You Can Help:

Any financial donation, large or small, will be greatly appreciated.

Please forward cheques to Carl Stevens, 10-223, 10th floor, Victoria Wing, Victoria General site or give to Michelle Murray in the Skills Centre for Health Sciences.

Make your cheque payable to:
Dalhousie University (Note: Simulation Centre in Rwanda)

Receipts for your charitable donation will be issued by Dalhousie University.

We thank you for your most kind support.

