

Traveling to Tanzania

By Jeanne Dillner, SIGN CEO

For the first time since 2019, we were able to travel and visit SIGN Programs. SIGN Engineering Manager Terry Smith and I visited Nkoaranga Lutheran Hospital, where Dr. Sam Kiwesa is the program manager. Nkoranaga is located just off the A23 highway, a busy thoroughfare that runs from Dar es Salaam, Tanzania to Nairobi, Kenya. During our visit we noted that 90% of the SIGN Patients were injured in traffic accidents and suffered a fracture.

Dr. Kiwesa was pleased to show us the new operating theatre. This new one had three ORs, where they previously had just one. Each operating room was well fitted and had enough space to fit the portable C-arm machine, which could be used if needed.

Dr. Kiwesa and his wife Villa have been kind of enough to become the guardians for Martha. Martha was the first recipient of the SIGN Pediatric Nail in Tanzania. She was operated

on in 2011 and has since finished high school, a two-year college prep program, and will find out in July whether she has been accepted into medical school. Martha is confident that she has passed her exams and is excited to begin medical school in September.

After a few days with Dr. Kiwesa, we traveled to Dar es Salaam. At Muhimbili Orthopaedic Institute (MOI), we met up with teams from the Institute for Global Orthopaedics and Traumatology (IGOT), University of California San Francisco, and SIGN Surgeons from many countries. Together they made up the faculty for the 8th MOI Trauma Course, a four-day training conference for surgeons from East Africa.

SIGN and IGOT have partnered for many years to provide educational experiences for SIGN Surgeons. It was a pleasure to join them again this year in support of the SIGN leadership at MOI.

Terry Smith provided education on the SIGN Equipment and received valuable feedback on new devices we brought for the SIGN Surgeons to use. I participated in several meetings to convey our commitment to continuing the SIGN Program at MOI and joined Drs. Coscia, Shearer, El Naga, and Gendelberg in establishing foundational relationships with the neurosurgeons and orthopaedic spine surgeons at MOI. We expect to begin the SIGN Spine program at MOI within a few months.

Relationships are key to successful programs. This visit rekindled old friendships and communication channels. We also opened the door for new opportunities to expand SIGN's efforts in Tanzania. We look forward to visiting more SIGN Programs as we progress out of COVID and back into meeting in person with our colleagues across the globe.



Engineer Goes International

By Terry Smith, SIGN Engineering Manager

It was my first trip to a SIGN-sponsored hospital, but not my first trip to a low-income country. I wasn't sure what to expect after looking at photos and x-ray images from SIGN Surgery cases for the past six years. From them, you get a sense of how effective implants and training are, but you don't get a feel for what works and doesn't in a hospital. With feet on the ground, you get a chance to see what influences the surgeons and patients.

Nkoaranga Lutheran Hospital

We started our trip in the Arusha region near Mount Kilimanjaro, visiting Dr. Sam Kiwesa at Nkoaranga Lutheran Hospital. I've had the great fortune of meeting Dr. Kiwesa at a SIGN Conference in the US, but seeing him in action on his home turf brings out the best in him. His calm and confident demeanor shows in how he treats his patients and hospital staff.



Dr. Sam Kiwesa guides Dr. Kaaya through SIGN Surgery.

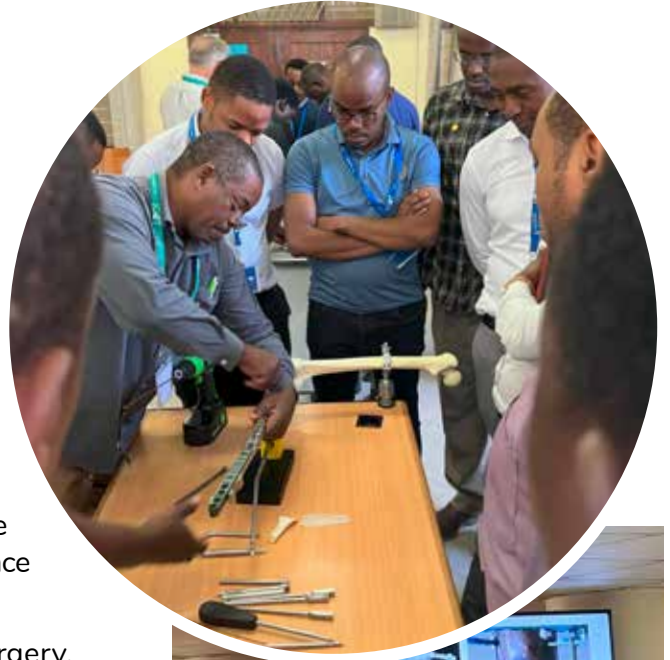
During our days with him, Dr. Kiwesa was mentoring Dr. Rahel Kaaya, who wants to learn orthopaedics. She is a quick learner and is inquisitive in asking questions and following his lead. One of the cases they worked on was an elbow fracture. As Dr. Kiwesa prepped the patient and started the surgery, I could tell he was using a technique taught at the SIGN Conference by Dr. Shawn O'Driscoll.

A few minutes into the surgery, Dr. Kiwesa explained the procedure to Dr. Kaaya and commented that he learned the approach from Dr. O'Driscoll at a SIGN Conference. It was rewarding to see that the hard work of preparing for and conducting bioskills lab sessions is paying off as the student has become the teacher, passing what he had learned to the next generation.

Muhimbili Orthopaedic Institute

That theme followed us to Dar es Salaam and Muhimbili Orthopaedic Institute (MOI), where we participated in the 8th MOI Trauma Course in partnership with the Institute for Global Orthopaedics and Traumatology (IGOT).

The conference was organized into two tracks. Senior surgeons could have both didactic and hands-on learning in their cadaver lab. At the same time, younger surgeons could follow a more didactic learning approach with hands-on learning during the SIGN Equipment session and technique observations in the cadaver lab.



(Top) Dr. Billy Haonga demonstrates the SIGN Technique. (Above) Dr. Daniel Sciuto teaches limb deformity correction.

SIGN Surgeons led several of the lectures in both tracks. As we saw with Dr. Kiwesa, it was great to see how SIGN Surgeons are stepping up to train the next generation of surgeons. It was exciting to see Dr. Daniel Sciuto from Kenya and Dr. Mapuor Mading from South Sudan as they lectured and taught in the cadaver labs. It wasn't long ago when they were both starting their orthopaedic careers, and now they are becoming mentors and leaders for the future.

SIGN Spine: A Second Pilot Project Site

By Mike Coscia, MD, SIGN Board Member

As we move forward with developing SIGN Spine programs, we are taking advantage of the opportunity to trial a second concept and second location for assisting medical centers to significantly upgrade their spinal trauma care.

Dr. Roger Hartl and the neurosurgeons from Weill Cornell Medical Center in NYC, USA, have worked with neurosurgeons at Muhimbili Orthopaedic Institute (MOI), for more than 10 years to help optimize care. They have established an excellent research program for spinal trauma with a large, actively growing database and an international fellowship. Similarly, Dr. David Shearer and the orthopaedic surgeons from the University of California, San Francisco (UCSF), have supported the SIGN long bone fracture care program. Both universities have contributed many significant publications from MOI. Dr. Scott Zuckerman, an

assistant professor at Vanderbilt University and the lead neurosurgeon with SIGN Spine, has completed Dr. Hartl's International Neurosurgery Fellowship at MOI and knows the program well. Drs. David Gendelberg and Ashraf El Naga, spinal trauma surgeons at UCSF, recently joined the SIGN Spine team.

In partnership with Dr. Laurence Lemery, head of neurosurgery, and Dr. Anthony Assey, head of orthopaedic surgery, and their respective departments at MOI, we plan to launch a second SIGN Spine pilot program during the summer of 2023. At this location, our goal is to establish a collaboration between Cornell/UCSF/SIGN Spine/MOI to expand upon the existing spinal trauma work and develop new avenues of intervention and application that can be used at future sites.

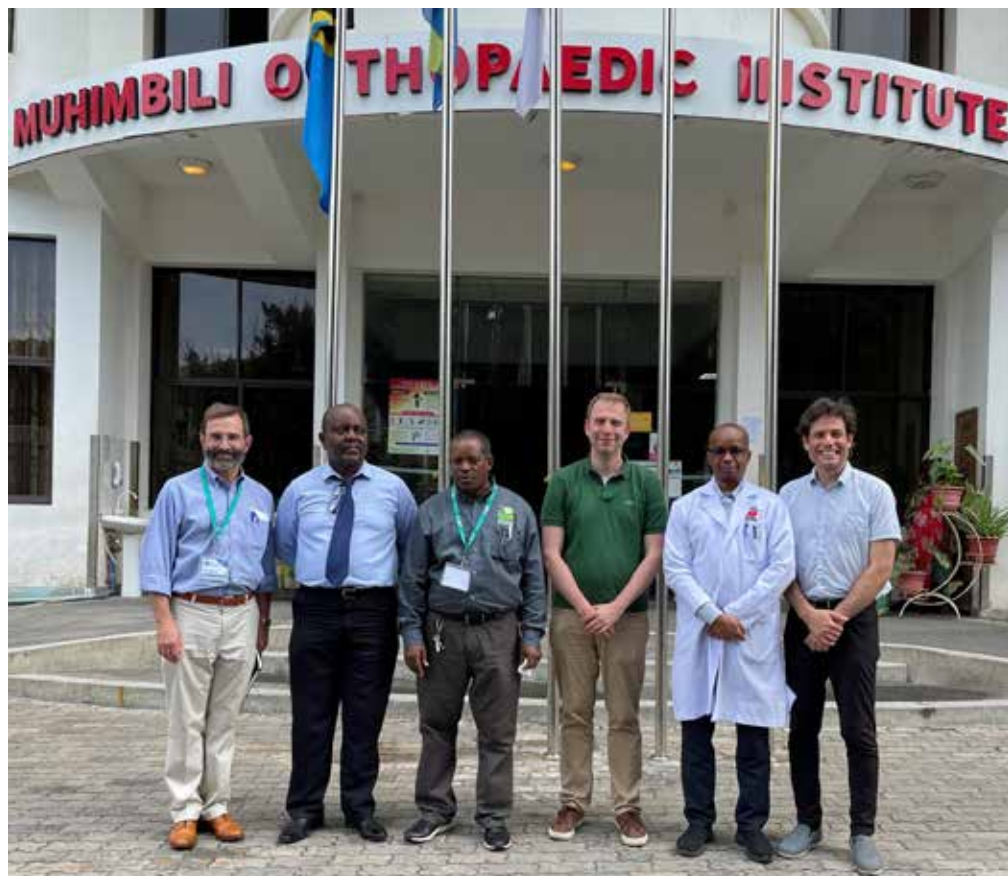


Dr. Shabani Kimaro (left) and Dr. Laurence Lemery from MOI will be integral to the success of SIGN Spine in Tanzania.

The initial SIGN Spine pilot program, at Moi Teaching and Referral Hospital (MTRH), in Kenya, will care for up to 500 patients over an approximate two-year time frame, with all levels of spinal trauma (cervical + thoracic + lumbar). That model includes sending a surgeon (Dr. Geoffrey Ngetich) to Canada for a one-year combined neurosurgery and orthopaedic spinal surgery fellowship. Assistance is also being given to improve the operating theatre access, for spinal trauma surgery, at MTRH.

The new Tanzania pilot project will enable care for 100 thoraco-lumbar spinal fractures at MOI, where an extensive amount of spinal surgery teaching and training occurs on a steady basis. Similarly, the facilities at MOI are already prepared for spinal trauma surgery.

We hope that by using two styles of intervention, we will learn how best to serve our surgeons and their patients. We also hope to demonstrate that this model of care is effective and efficient, so we can partner with more hospitals and funding organizations to care for more people who suffer from debilitating spinal injuries.



(Left to right) Drs. Mike Coscia, Anthony Assey, Billy Haonga, David Gendelberg, Laurence Lemery, and Ashraf El Naga.



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