



Tanzania Neurosurgical Project Survives (and Thrives) During a Global Pandemic

To say that the pandemic threw a wrench into our plans for neurosurgical training in Tanzania would be an understatement. Just as Covid-19 upended health care (and everything else), it forced us to completely overhaul how we approached our educational efforts in low- and middle-income countries. I am happy to say that some of the changes we made to adapt to these extraordinary times provided some surprising benefits that helped offset our losses.

Perhaps the most rewarding benefit came when we introduced our new scoliosis course via Zoom. We had long been planning this new training event (designed to supplement our annual neurotrauma course), and the prohibition on travel did not stop us. In fact, presenting the course virtually allowed us to schedule some of the very top experts in scoliosis surgery to present to an invited class of 37 surgeons from 13 of the 14 member countries of the College of Surgeons of East, Central, and Southern Africa (COSECSA). For six Sundays in January and February, participants logged on for sessions that included lectures, breakout discussions, and case presentations.

Later in the year, a live training camp allowed a limited number of trainees to receive hands-on training while dozens more attended virtually. At that camp, Dr. Massimo Balsano of the Universities of Verona and Sassari and Dr. Alaa Ahmad of the Palestine



Polytechnic University, two highly specialized surgeons in scoliosis, operated on five patients with adolescent idiopathic scoliosis while teaching and mentoring local surgeons from East Africa. They also trained local doctors to perform casting, a conservative way of treating children with early onset scoliosis. The camp was recorded and live streamed through Zoom to allow doctors who were not on site to assist, interact, and observe. (See page 2 for more photos of the virtual course and the surgical training camp.)

These educational efforts are paying off, and I could not be more grateful to the generous donors who have supported this work for more than a decade. Thanks to you, we have saved countless lives that would have been lost to traumatic injury, relieved suffering in children born with hydrocephalus or neural tube defects, and—now—trained more local surgeons to correct terrible spinal deformities in young people to allow them to live productive lives.

We are planning our next trip to Tanzania in the spring of 2022, assuming health conditions allow. As we await that long-overdue visit, we continue to partner with in-country health care providers to help them develop skills in surgery, recovery, research and data management, and more. We are even developing a new course, to debut in 2022, in minimally invasive surgery using only locally available equipment.

Technology Keeps Global Neurosurgeons Connected

A web site at TanzaniaNeurosurgery.org has made it possible for us to provide learning materials, agendas, and links for our virtual courses, available to all. Our team uses Zoom and WhatsApp to stay in touch, hold virtual meetings, and share photos. (Most of the photos in this newsletter were taken in Tanzania and sent to us in New York in moments via WhatsApp!)

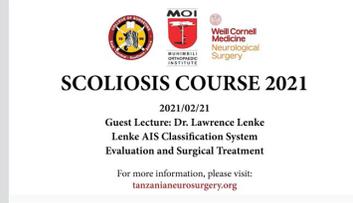


I hope you are all working your way successfully through these difficult days, and I thank you for your continued support for this important project.

Top: Under Dr. Ahmad's watchful eye, the MOI team performs a complex scoliosis correction as part of the October surgical training camp. Bottom: Just one day after casting, a young patient is standing upright. Casting is a more conservative option than surgery and can sometimes prevent the need for later surgery. One goal of the scoliosis camp was to treat patients early enough to slow the progression of scoliosis, improving quality of life immediately and reducing the need for corrective surgery later.

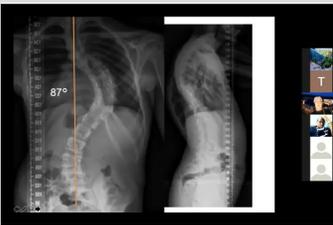
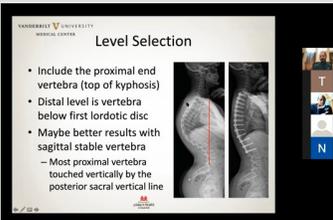
Learning from the Source

It's likely that none of the course attendees will ever forget the experience of hearing Dr. Lawrence Lenke talk about the Lenke Classification System, which he developed. A rapt online audience listened intently as Dr. Lenke described the curve rating system he created for adolescent idiopathic scoliosis. Scheduled for a half-hour



talk, Dr. Lenke generously stayed for an hour beyond his allotted time to answer questions from these eager surgeons. Attendees also benefited from a guest lecture by orthopedic surgeon Dr. Michael Vitale, the notable pediatric scoliosis specialist from Columbia University.

The course was organized by Beverly Cheserem, who was our Global Neurosurgery Fellow in Tanzania at the time, and featured as faculty three international luminaries in the field of scoliosis surgery: Dr. Massimo Balsano of the Universities of Verona and Sassari, Dr. Alaa Ahmad of the Palestine Polytechnic University, and Dr. Christopher Bonfield of Vanderbilt University.



Welcome to Our New Global Neurosurgery Fellow

We were very excited to welcome Dr. Francois Waterkeyn, who joined the team in Tanzania in July as our 2021-2022 Global Neurosurgery Fellow.



Dr. Waterkeyn earned his medical degree at the Catholic University of Louvain in Brussels, where he also completed his neurosurgical training in 2012. After that, Dr. Waterkeyn moved to Perth, in Western Australia, to improve his surgical skills by doing a general neurosurgery fellowship. Before joining the team in Tanzania, Dr. Waterkeyn had most recently been working at Grand Hôpital De Charleroi in Belgium, where he treated a wide range of brain and spine conditions.

His interests in Global Health Neurosurgery has progressively increased over the last years, so that he decided to spend the next year at Muhimbili Orthopedic Institute helping train local surgeons and other providers in neurosurgical care. He was instrumental in organizing the in-country scoliosis surgical training camp in October, and will also be organizing our upcoming 2022 in-person trip. He is also supervising the ongoing data collections on spine and brain traumas.

In collaboration with Dr. Fabian Sommer, our current clinical research fellow at Weill Cornell Medicine in New York, Dr. Waterkeyn participates in the assessment of "smart glasses" as a tool to train local surgeons during surgery. His expertise and his presence on site is helpful in helping communications and supervision of many different ongoing projects.

Scoliosis Training Camp 2021

Clockwise from top left: The assembled faculty and trainees of the training camp; Dr. Ahmad and Dr. Costansia Bureta (a neurosurgeon at MOI) perform one of the surgeries assisted by Dr. Kumwenda from Malawi and Dr. Msami Ngowi of MOI; the anesthesia team prepares a patient for surgery; Dr. Ahmad and Dr. Balsano teach casting; scrub nurses participating in the course, with the Zoom screen behind them showing the remote attendee view; Dr. Ahmad and Dr. Mwakipesile of Bugando review anatomy and then surgical implants; Dr. Bureta and a neurosurgical resident observe a complex procedure.



Keep up with our work by visiting us on Facebook or at weillcornellbrainandspine.org/tanzania