



# Mission in Tanzania

**C**ovid-19 has changed life for all of us, but for our Global Neurosurgical Fellow in Tanzania the pandemic has truly upended everything. After eight years of medical and neurosurgical training in the U.K. and two years in the fellowship, Dr. Beverly Cheserem was scheduled to return to her native Kenya this spring. That plan changed when the border with Tanzania was closed in May to stop the spread of infection. Beverly will remain at MOI until the border reopens.

I am proud to present Beverly's update below and hope it gives additional insight into the work she does in Tanzania. Even in the face of a global pandemic, she has been doing marvelous work in all aspects of her fellowship. The pandemic has not affected the surgical volume, but staffing the new operating rooms and facilities has been an ongoing obstacle. Thankfully, Beverly's dedication and hard work has been instrumental as she performs surgery and trains new staff.

Though we will be sad to lose Beverly when she heads back to Kenya, she will not be far away! Kenya, just north of Tanzania, allows us to be in constant contact with her and call upon her support and collaboration in the future. I am hopeful that her work will resonate for years to come and that our partnership with her will be an everlasting one.



Dr. Cheserem with Dr. Shabani

## Fellow's Report From the Field

BY DR. BEVERLY CHESEREM, BM (hons)  
WEILL CORNELL GLOBAL NEUROSURGERY FELLOW 2019 – 2020  
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It is a privilege to work as the Weill Cornell Medicine Global Neurosurgery fellow in Dar Es Salaam, Tanzania. I receive excellent support and mentorship from Dr. Härtl and I get a unique insight into how to adapt evidence-based medicine, research, and health systems development to the resource limitations of a country like Tanzania. This fellowship has deepened my desire to continue to work in global health. It is a testament to Dr. Härtl that his previous fellows stay in contact with him and continue to engage in the Cornell-MOI partnership.

During my time here I have been involved in many activities, including our Tuesday video conference calls between MOI and Cornell. I also set up a monthly scoliosis call, in which scoliosis experts from North America, Europe, and the Middle East advise local doctors on the best treatment strategy for Tanzanian patients. Many of these patients are in their teenage years, and getting expert advice that can be put into effect here allows them to continue their education while we plan for their treatment, without their families' having to seek opinions and treatment outside the country, at great financial cost.

The fellowship also includes research on spine trauma and traumatic brain injury. Under the stewardship of Dr. Roger Härtl and Dr. Halinder Mangat, both of Weill Cornell Medicine, and Dr. Hamisi Shabani at MOI, the databases are some of the most robust in the region and an important part in assessing patient outcomes in addition to service development. One ongoing project involves using donated screws for spine trauma patients, who would otherwise have to wait for their families to gather funds to pay for them. My role is to assess suitability of patients for the study, collate outcome data, and present them for review. This is an exciting and pragmatic study and the first of its kind in a sub-Saharan African country. The interim results show shorter inpatient stays and faster times to rehabilitation, particularly in thoracolumbar fractures.



Here I am, operating with  
Dr. Nicephorus Rutabasibwa

Education is a key part of the fellowship. I have had the opportunity to teach residents in the department during the morning handover rounds and on the wards. I gave seminars to the ENT residents during their neurosurgery placements and helped set part of their assessments.

In July 2019 MOI opened a new 18-bed intensive care unit (ICU) and a 16-bed high dependency unit (HDU). Prior to the Covid-19 outbreak I started a bi-weekly lecture sessions with nurses and nursing aides in the HDU. The sessions have since resumed and are highly valued by the HDU staff. They have noted that it is improving their knowledge and skills on the job. I hope that even when my fellowship is completed, I will still be able to support the staff with training and advice.

I have also provided training on basic ICU principles to the junior residents. This has included bedside teaching, informal mentoring, linking them to appropriate online content, and most recently securing access to *The Beginners Guide to Intensive Care: A Handbook for Junior Doctors and Allied Professionals* courtesy of Dr. Nitin Patel, one of its editors and an intensive care consultant in the UK. A locally printed copy of the book has also been provided free of charge to the trainees, ensuring that a lack of internet access is not a barrier to reading the book.

Part of health service development is looking for opportunities to reduce the risk of drug errors. I have worked with the pharmacy department in several ways. First, under the guidance of Dr. Mangat, we worked to support the ready availability of key drugs in the ICU. (Previously the drugs were within the institution but not necessarily available in the newly established ICU.) Working with the newly appointed pharmacist, we developed a system to ensure that ICU drug stock levels are maintained.

Second, I noticed that many online drug reference sites are blocked within Tanzania, making it difficult to check on the appropriate formulations and dosing. I adapted a medication reference chart from a nearby institute of commonly used drugs at MOI. This charts have been placed in the pharmacy as well as in the ICU, HDU, recovery, and the resuscitation station in the emergency room. It has both adult and pediatric dosages and the caveats in drug administration. The master copies have been electronically copied to the respective heads of department to facilitate updates in the future. I am also working with MOI to introduce a more comprehensive drug chart, which has been adapted with permission from the All Wales Medicines Strategy Group, UK.

As Covid-19 spreads around the world, Tanzania has had few cases. Clinical services are almost back to normal but in keeping with international guidelines on the risk of Covid-19 in endoscopic surgery, we have discontinued the teaching of pituitary endoscopic surgery. The staff here has continued to push forward and ensure safety; masks must be worn by outpatients and staff at all times. Through all of this, as the main provider of neurosurgery services for Tanzania, MOI's continues as always, 24/7.

In my limited free time I have rounded out my experience here by visiting the UNESCO World Heritage site of Zanzibar as well as the Bagamoyo ruins that capture Tanzanian history from the local community, the arrival of Persians, slave trade, and the era during which Tanzania was a German Protectorate.

It has indeed been an honor and privilege to work here. At this point in my fellowship I am tremendously excited and enthusiastic about what lies ahead.



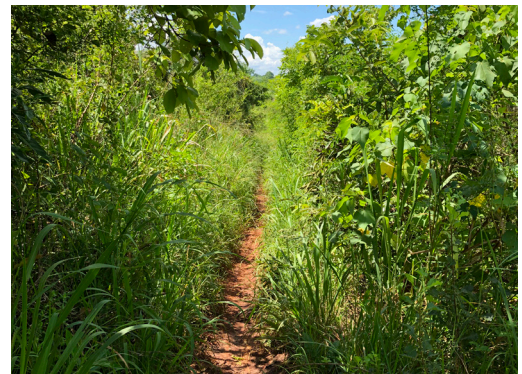
*Teaching ICU nurses spine biomechanics and managing spine trauma patients*



*Bi-weekly informal tutorials held for HDU staff*



*New medication reference chart and a focus group for the new drug chart*



*(L-R) Zanzibar's beautiful seaside views; 2000 locally made cloth masks for the pediatric inpatient hospital; The green paths of Tanga, thought to have been a route slavers used to walk their captives to the sea to ship to Zanzibar and the Middle East.*