VIEWPOINT

'You'll Help Save Others Like Him' — Notes from the Wards of Uganda

BY JASON J. SICO, MD

"You'll help save others like him." As I was driving to JFK International Airport for my return trip to Mulago Hospital, situated in Kampala, the capital of Uganda, my wife knew I was thinking about James. I had met him during my six-week residency there, when I participated in the Yale/Johnson & Johnson Physician Scholars in International Health Program.

I have cared for other patients in the last hours of their life, but none like James. In our short time together, he taught me about the limitations of health care in Africa. He also helped me gain a visceral appreciation of the sanctity of life and our responsibility as neurologists to improve the delivery of neurological health care in whatever capacity we can.

When I met James, he was healthy as a young boy in rural Uganda could be. He was one of nine children, four of whom survived into their adolescent years. When his symptoms manifested, they were at first innocuous — and dismissed as secondary to a recent diarrheal illness. Then several days of lethargy progressed to high fevers, chills, and night sweats. Based on these symptoms, James was initially treated for malaria in one of the nation's 250 health care centers.

Health care centers are separate from the nation's larger hospitals, and critical to Ugandan health care. More than 60 percent of Ugandans live in rural areas and rely on such health care centers for medical care. Their capabilities are limited. Despite treatment, James' symptoms worsened and his family and village knew they would have to get James to Mulago Hospital in Kampala, Uganda's capital city.

Given the poverty and limited transportation available to rural Ugandans, it took one week for James' village to raise enough money to arrange for his transportation to Mulago – only 35 kilometers from James' home. During that time, James's condition worsened as he developed intermittent posturing of his left upper extremity.

Mulago Hospital is Uganda's largest tertiary care referral center. As a 1,500-bed facility, it attends to 120,000 inpatients annually. The mortality rate is as high as 50 percent or more, depending on the ward. The mortality rate can be attributed to a variety of factors, including lack of primary care, limited access to specialty care, and even more limited resources for patients that present late in the course of an illness. When James arrived in the emergency room at Mulago, he was diagnosed with viral gastroenteritis, and was started on intravenous fluid, paracetamol, and continued on quinine for possible malaria.

DR. JASON L. SICO: "Increasing the education and capabilities of the physicians who are permanently embedded in places like Uganda will make a difference in the lives of patients that will last long after a volunteer physician has returned home."

James was initially admitted to the gastroenterology ward. Even then his nursing care was primarily in the hands of porters, the women who accompany patients from their village to help administer medical care. They are essential for in hospital care in Uganda due to a shortage of trained nurses — at Mulago Hospital, there could be four to five nurses for a ward of 80 to 90 patients.

Porters assist by retrieving medication from the pharmacy and administering it to their sick clansmen, bathing and feeding them, and at times drawing blood. They would also assist the hospital's trained health care personnel by monitoring a patient's condition overnight. When James's doctor arrived the next day, his porters had bad news.

James's fevers were now persistent, and he was having more frequent and prolonged episodes of focal seizures lasting upwards of several minutes. Over the next day and a half, he was started on a combination of phenytoin, valproic acid, Phenobarbital, and carbamazepine, but his seizures failed to moderate. His quinine was continued and he was started on ceftriaxone.

It was advised that he have both an EEG and head CT. Unfortunately he was not able to get an EEG, since the elevator leading to where the EEG machine was housed had been broken for several months, the unit was not portable, and his porters would not permit James to be moved from his bed. The head CT would also prove tricky.

According to the World Health Organization, 85 percent of all medical expenditures in Africa are out-of-pocket. On a continent where 424 million people (45 percent of the population) live for less than a dollar a day, paying the equivalent of $100 for a head CT is not an easy task.

One porter returned to the village with this news, and to give updates to James's parents, who were unable to make the trip to Kampala. The porter returned four days later with more than $50. The difference for the CT scan was made up by donations from the hospital and other visiting physicians.

It was at this point that I met James. His head CT showed a large right frontal abscess with significant edema and mass effect. His antibiotic coverage was immediately broadened and his phenytoin dosing was increased. Neurosurgical consultation — there are two neurosurgeons in all of Uganda —agreed with continuing antibiotics and recommended repeating the head CT in two weeks.

When I met James, he was afraid — fearful, because he could no longer control his body and was now too weak to care. Later that evening, James went into convulsive status epilepticus and died. The news of his death saddened me greatly. I am not sure what upset me more — the fact that three weeks ago he was a healthy young boy, or that his case would never have had such a tragic end in a Western medical facility.

I imagined James coming into a New England emergency room after a seizure, getting his routine labs and blood cultures, receiving treatment for his seizures, and a head CT. Once his abscess was found, he would have had it drained and continued on antibiotics. A neurology patient at Mulago Hospital will likely never enjoy this level of care. In a country with limited access to limited resources, where six neurologists (four of whom are visiting) tend to a population of 32 million, how could one neurology resident make a difference?

The answer is training. After I met James, I realized that the best way I could help was to teach Ugandan physicians more about the diagnosis and management of neurological illness. The majority of patients presenting with seizures, stroke, and meningitis are never seen by a neurologist, but their symptoms can still be diagnosed and treated if their primary care physicians are better-equipped to manage these patients.

During the remainder of my time at Mulago Hospital, I made a concerted effort to give lectures, physical diagnosis, and when applicable, neuroradiology rounds on patients on the neurology ward and throughout the hospital. Becoming more aware of the circumstances in which they practice medicine better enabled me to find how I could best help them. By the end of my time in Uganda, I left knowing I had made a difference.

I highly recommend this approach to other physicians preparing for a volunteer medical mission in an underdeveloped country. Increasing the education and capabilities of the physicians who are permanently embedded in places like Uganda will make a difference in the lives of patients that will last long after a volunteer physician has returned home. My experience in Uganda changed my life. As I return there, I hope to see that my efforts have helped, in some small way, to improve patient care. •

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For more on Dr. Jason L. Sico's observations about neurology and the state of medicine in Uganda, see Global Neurology: 'Serving International Neurology in Uganda' on page 4.