

NICOLINE SCHIESS, MD, MPH

Global Neurologist Profile

Sasha Yakhkind, MD



Born and raised in South Africa, I saw the consequences of infectious diseases first-hand at an early age. More importantly, I saw the effects that poor health care and lack of resources to treat these infectious had on their victims. For these reasons, I was always attracted to medicine as a profession. I graduated from UC San Diego (UCSD) with a Bachelor of Science degree in Neuroscience. Seeking to expand my experiences beyond the United States, I enrolled at Semmelweis University of Medicine in Budapest, Hungary, where my family is originally from. I then returned to the United States to complete neurology residency at New York University.

Always eager to work internationally, I spent one month after residency at Christian Medical College in Vellore, India. Struck by the amount of neuro-infectious disease there, I became torn between specializing in neuro-infectious diseases and neuro-immunology. Luckily, Johns Hopkins University offered a strong, combined Neuro-immunology and Neuro-infectious Disease fellowship. In 2006, I was awarded the National Multiple Sclerosis Society-American Academy of Neurology (NMSS-AAN) fellowship for two years and subsequently remained at Johns Hopkins as faculty. During this time, I also obtained a Master of Public Health from the Bloomberg School of Public Health.

In 2010, I received a Fulbright Scholar Award to teach neuroscience at the UAE University and start a multi-disciplinary Multiple Sclerosis clinic at Tawam Hospital in Al Ain, United Arab Emirates. Since that time, I have divided most of my time between Johns Hopkins in the US and the UAE. In addition, I spent two years teaching neuroscience to medical students in Kuala Lumpur, Malaysia, and I currently collaborate on an NIH funded study examining the neurologic sequelae of cerebral malaria in Zambia.

1. How did you choose your specialty?

The central nervous system has always been my primary interest. Before starting medical school, I knew I wanted to be a neurologist with a focus on multiple sclerosis. However, I was also drawn to neuro-infectious diseases, which combined my interest in global health with my broad experience studying the nervous system.

2. How did you get involved in neurology abroad?

I've been very lucky to have the support of our department chair in the Department of Neurology at Hopkins who is willing to think outside the box and support faculty members in the field of global neurology. Johns

Hopkins International operates Tawam hospital where I have worked in the UAE for the past seven years. Each spring I return to the US for approximately 2-3 months to direct the Nervous System/Special Senses course for the Hopkins first year medical students and to see patients on the consult service.

3. What are your current research projects?

When I first arrived in the UAE I was unsure about whether I would be able to conduct research in the same manner as at Johns Hopkins. However, Abu Dhabi has a well-established health care system with electronic medical records. This provided an opportunity to study the epidemiology of demyelinating disorders in this region. We have published on the prevalence of Multiple Sclerosis in the region and are currently submitting more epidemiologic papers on MS in the pediatric population and transverse myelitis/NMOSD. Seeing patients in this region also offered a unique opportunity to identify novel genetic disorders.

Johns Hopkins Medical School has had several students do clinical and research electives at Tawam hospital and we are currently finalizing a formal Global Neurology program in the Department of Neurology. This program includes study sites in the UAE, Uganda and Zambia for medical students, residents, and fellows.

4. What do you do in your free time? How does that differ based on where you live?

Despite the backdrop of regional political instability, the UAE is an incredible place to live and a wonderful place to raise children. It offers a large variety of cultures, cuisines, religions, and languages. I spend my free time at the beach, scuba diving, and camping in the desert with my children. We also enjoy traveling.



Nervous System/Special Senses Neuroscience course at the Perdana University Graduate School of Medicine in Kuala Lumpur, Malaysia

EUROPEAN ACADEMY OF NEUROLOGY REGIONAL TEACHING COURSE IN SUB- SAHARAN AFRICA

Conference Update

David Riley, MD

The European Academy of Neurology (EAN)'s 9th Regional Teaching Course in Sub-Saharan Africa was held November 8-11, 2017, in Ouagadougou, Burkina Faso. This annual course is conducted for neurology residents selected from all over Africa; this year, approximately 40 residents represented 28 countries, supplemented by additional residents from the host country. For many of them, it was their first opportunity to mingle with faculty from the rest of the world, as well as contemporaries who will become far-flung colleagues for their entire careers. Half of the faculty were also invited from a variety of African countries; the rest were supplied by the EAN. As has become customary, the EAN asked the American Academy of Neurology (AAN) to sponsor a faculty member to contribute to the teaching effort. This year, the Europeans specifically requested that the Americans supply someone with movement disorders expertise, which is why I became the AAN's delegate to this year's course. The course was led by Professor Erich Schmutzhard of Innsbruck, a charismatic and uniquely talented individual equally proficient in tropical medicine and critical care neurology. Dr. Schmutzhard publicly thanked the AAN on multiple occasions for their support of this endeavor.

The daily format consisted of three sections, beginning with three formal 30-minute lectures by faculty, followed by two "Grand Rounds"-style case presentations by individual residents. These first two sections concentrated on a different topic for each of the four days of the course: stroke, movement disorders/dementia, spinal cord disease, and neuromuscular disease (topics change each year). In the third section after lunch, the students divided into four workshop groups. Each group spent the afternoon with the relevant faculty on case discussions illustrating one of the four morning topics, rotating topics daily. At the end of each day the residents wrote an exam, much like a Continuing Medical Education exercise.

I was greatly impressed with the fortitude of the residents. Although most of the residents were from francophone countries, the official language of the course was English, and English slides were mandated by the EAN. I admired their dedication in having to learn neurology in what for most of them is a foreign language. I marvelled at their unflappability. While the morning sessions were conducted in an environment of modern comfort, the afternoon workshops took place in medical school classrooms that were not air-conditioned. The erratic electricity was off more than it was on, and most of the sessions were conducted under ambient light filtering through the windows and without the benefit of ceiling fans to mitigate the 100°F heat. Not a single complaint was voiced, even as the residents had to write daily exams after a long day under those conditions. Considering this setting, together with the ubiquitous security precautions, it was heart-warming to see these residents, at least outwardly, display the same joyfulness of youth everywhere.

Burkina Faso currently ranks number 185 of 188 countries on the United Nations Human Development Index, and there was visible evidence everywhere outside of our hotel compound. Yet that did not impede Professor Jean Kaboré and his Ouagadougou colleagues and staff from making the visiting faculty feel pampered. They could not have been more generous or hospitable.

Over the four days of the course, a realization of the significance of the project progressively sank in. It became clear that the participating residents constituted a precious resource to their home continent. We heard African faculty repeatedly remind the residents "You are the future of Africa," as they exhorted resident speakers to strive for scholarly excellence. At the banquet for students and faculty, the residents took turns briefly describing life in their home country. While this was a charming event that allowed the faculty to see the residents as individual personalities, it had serious overtones. It was common to hear statistics such as "We have three neurologists in our country of 11 million." Recognizing that these residents were often poised to increase the capacity of neurologic expertise for their entire country by 20-33% added considerable urgency to the faculty's mission to impart as much knowledge as possible during our brief time together. Looking back, I know I will think of this experience as one of the most memorable and meaningful of my academic career. I strongly encourage anyone considering volunteering for future courses to do so; I would return in a heartbeat.

I am truly grateful to the AAN for the opportunity to participate in this wonderful program. I would like to express my thanks to Dr. Kaboré and our other hosts for their tremendous hospitality. I feel extremely fortunate to be able to go home to a relatively luxurious existence. I came away wishing there were more that we could do to help our dedicated African colleagues. Professor Kaboré identified the lack of access to medical literature and teaching materials as the greatest obstacle to fulfilling his educational mission. I wish there were a routine mechanism for sharing our intellectual bounty with our African colleagues: textbooks, online journal access, videoconferencing of presentations, etc. Some of these communication channels could be established at little cost, and the rewards would be potentially enormous. As some of my course faculty colleagues might say, we are talking about the future of Africa.



Participants in the EAN's 9th Regional Teaching Course in Burkina Faso

TEACHING AND PRACTICING ACUTE NEUROSCIENCES IN TANZANIA

HALINDER S. MANGAT, MD

In Tanzania, few patients have the opportunity to be seen by a specialist for a neurological illness. And the medical trainees suffer a similar lack of specialist neurologists to educate and train them. There are six neurologists in Tanzania, all but two are in Dar-es-Salaam. It is classified as a Low-Middle Income Country (LMIC) by WHO standards, with a population of 55 million (more than Kenya and Uganda); yet, Tanzania is different. It has an impressive GDP growth rate of 3.7% (N. America 0.8%, Eurozone 1.3%, and sub-saharan Africa -1.5%).



Stroke incidence in rural Tanzania is similar to that of the Northern Manhattan Stroke cohort (NOMAS) and the incidence of stroke in Dar-es-Salaam, the capital city, is significantly higher than that of the NOMAS cohort. 60% of stroke patients do not survive past four years.

Shortly after starting to work at Weill Cornell Medical College in 2010, having always been interested to 'live again' in Africa, I was very excited to learn of the Cornell Global Health Department's

projects in Tanzania. My first trip to Tanzania in 2011 was to Bugando Medical Center in Mwanza, the second biggest city in Tanzania, and was an exploratory trip to review existent resources and needs in acute neurosciences, for I am a neurointensivist. This tertiary referral hospital serves the Lake district with a population of 2.7 million. It became very quickly apparent that visiting to treat patients was not going to alleviate the burden of disease in the long run. Training future neurologists, learning unique neurological problems, and how to manage patients with local resources had to be the focus. Learning how active tetanus is managed without mechanical ventilation, how postpartum women with eclampsia and renal failure are saved by peritoneal dialysis using skills a registrar acquired on his own, how schistosomiasis causes various myelitis, and how young fishermen succumbed to variceal bleeding from schistosomiasis related portal hypertension, young men to traumatic brain injury, and many more just from bad luck. I have since developed close collaborations in Tanzania and have been involved in several projects.

My main current projects include:

Neurology curriculum teaching for Internal Medicine residents at Catholic University of Health and Allied Sciences (CUHAS), Bugando Medical Center, Mwanza, Tanzania, since 2011. This is a 900-bed tertiary care hospital on the banks of Lake Victoria, with most specialties except neurology. The Internal Medicine residency has up to six residents per year. The initial starting point was teaching 'neurological

examination,' and over the years using a neurology board review course as a basis, in addition to tropical neurology texts for a curriculum outline, the residents have made headway with dramatic improvement in scores in neurology on the in-service and graduation exams. They are no longer scared of the neurological patient. In addition, I am currently a mentor to a junior faculty member at CUHAS who has been awarded a MEPI-T sub-award to study the treatment of epilepsy in the Lake district. In collaboration with local faculty and an anesthetist-intensivist from University College, London, we have just completed data collection for a retrospective review of mortality of tetanus since 2001.

Traumatic Brain Injury Project at Muhimbili Orthopedic Institute, Dar-es-salaam since 2012. With support from the Brain Trauma Foundation we have established a TBI database, educational course, and clinical treatment protocols. Severe TBI mortality is currently 66%, which is five times that seen in New York State and at least four times higher than the average mortality in a developed country. We have accumulated over 400 patients in our TBI database and are examining factors contributing to the markedly high mortality. I have mentored a medical student who has just completed her Master's Degree in Global Health from Maastricht University; her thesis examined factors contributing to low utilization of CT imaging after severe traumatic brain injury. We have also just completed the 4th annual course on Neurotrauma, which is now part of the core educational curriculum for surgeons training in east, central and southern Africa. This course now attracts over 100 participants who are surgeons, emergency physicians, anesthesiologists, surgical and neurosurgical trainees along with nursing staff. For the first time, we also included a separate day of training in Neurocritical Care this year and received a very enthusiastic response and participation.

Our large and diverse multi-specialty group believes that to develop self-sustaining change we must train the physicians and health care workers of the future. And while we do that, we can partner, twin, with institutions for educational exchange, and help quantify disease burdens locally and the circumstances which pose barriers to higher level of care. Much as lack of resources appears to be a primary cause, data remains scarce in several disease entities.



"If you want to go quickly, go alone. If you want to go far, go together." –Oft quoted African Proverb.