

Sustainable Solutions: Wide-awake Hand Surgery in Ghana

Donald Lalonde, MD, FRCSC, works with local partners to bring wide-awake surgery technique to low-resource settings

● KATIE MCMULLEN

AROUND THE WORLD

Donald Lalonde, MD, FRCSC, a hand surgeon in New Brunswick, Canada, began volunteering internationally in 1991, providing surgical care in resource-scarce settings through Operation Smile, Smile International, and Operation Rainbow Canada.

During his time with these direct-service organizations, Dr. Lalonde witnessed many of the challenges low- and middle-income countries face in providing surgical care. His experience treating a young patient on an early trip to Peru crystalized his understanding of the need for sustainable solutions.

“A 10-year-old boy in the mountains in Peru came for hand reconstruction after an explosion injury left him with two useless but nimble fingers from flexor tendon loss,” said Dr. Lalonde. The boy’s injury was repairable, but the expense of a full, sterile operating room (OR) and general anesthesia posed significant obstacles.

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Donald Lalonde, MD, FRCSC

“I explained to the boy and his parents that we could reconstruct his hand with field sterility and wide-awake surgery as we do in Canada,” continued Dr. Lalonde. “I realized that many people in emerging countries never get reconstructive hand surgery because they cannot afford general anesthesia and main OR sterility traditionally required for these operations. It became a mission [of mine] to develop the science and [literature] to export wide-awake hand surgery from Canada to the rest of the world so people could afford reconstruction.”

Accomplishing this mission required support and buy-in from multiple partners, including local health institutions and health workers in resource-scarce countries. Dr. Lalonde connected with local partners when he joined Health Volunteers Overseas (HVO) in 2012. HVO is a nonprofit dedicated to improving global health through education. HVO partners with local institutions to address specific needs, working to ensure that volunteers bring knowledge and skills that can be applied using the available resources.

For his first assignment with HVO, Dr. Lalonde traveled to Kumasi, Ghana, where HVO has partnered with Komfo Anokye Teaching Hospital (KATH) since 2010 to improve trauma care and expand their orthopaedic and plastic surgery residency programs.

“When I first went to KATH in 2012, almost all of what little hand surgery was performed was in the main OR environment with general anesthesia and full sterility, at great unaffordable cost to

most of the population,” noted Dr. Lalonde. “Not only was the fee prohibitive for hand reconstruction after injuries, but the waiting line to get into the OR was filled with higher priority cases, such as fractures of the long arm and leg bones. Most hand injuries were left untreated.”

With just one full-time hand surgeon at the hospital, KATH expressed a desire to expand hand surgery services. Dr. Lalonde worked with HVO and KATH to launch a hand surgery component for the existing orthopaedics



Health Volunteers Overseas volunteers present a lecture to Komfo Anokye Teaching Hospital staff. COURTESY OF DONALD LALONDE, MD, FRCSC

project, with support from HVO’s sponsors, the American Association for Hand Surgery (AAHS) and the American Foundation for Surgery of the Hand.

As project codirector, Dr. Lalonde worked closely with local staff to devise project goals that would increase the number of trained hand surgeons in Ghana, ultimately improving the availability of hand surgery.

The introduction of wide-awake surgery at KATH has enabled the hospital to expand its hand surgery services. On his first trip to the site, Dr. Lalonde worked with Osman Saani, MD, the only full-time hand surgeon at KATH, to successfully conduct the hospital’s first wide-awake hand surgery. Dr. Lalonde continues to work with Dr. Saani and KATH staff and administration to ensure sustained access to this procedure. The project has also developed a hand therapy component to provide a continuum of care for patients, further enhancing outcomes.

A case that Dr. Lalonde assisted with in September 2016 exemplifies the impact of the combined efforts of hand surgeons and hand therapists at KATH.

“I helped Zainab Shumaker, MD, a plastic surgery resident, repair the nerves and tendons in the wrist of a patient using the wide-awake approach. It was one of her first experiences with this technique,” he recounted.

“Mr. Robert Sowa, the new hand therapist in Kumasi, also helped the patient achieve a great result. The patient returned to thank us in February 2017.”

On his most recent trip, Dr. Lalonde witnessed significant progress in hand surgery services at KATH because of the collaboration of HVO volunteers, the hospital board and administrators, and the dedicated surgery team at KATH.

“In February 2017, with the help of the hospital board and leaders in surgery (Joseph Akpaloo, md; Oheneba Owusu-Danso, MD; and Vincent Ativor, MD), the first wide-awake minor procedure room was established in the hospital,” he said.

“This accomplishment allowed minor hand trauma procedures to [occur as performed] in Canada. [It costs half as much as using the] main OR, and the resources required and garbage production is greatly reduced. This has made reconstructive hand surgery more affordable and accessible for many people in Kumasi,” he added.

In addition to his duties as the project director for the hand surgery component of HVO’s project at KATH, which include recruiting and preparing volunteers, Dr. Lalonde undertakes outreach efforts at home to increase awareness of the global burden of surgically treatable conditions. He encourages young surgeons to become active internationally through presentations and

HVO seeks volunteers

Health Volunteers Overseas has many short-term volunteer opportunities available, including projects in Bhutan, Bolivia, China, Costa Rica, Ghana, Malawi, Myanmar, Nicaragua, the Philippines, St. Lucia, Tanzania, and Uganda. Assignments generally last two to four weeks, and volunteers are placed throughout the year.

Senior orthopaedic residents interested in volunteering may apply for the Orthopaedics Traveling Fellowship. For more information, visit www.hvousing.org.

workshops at professional society meetings.

Dr. Lalonde also provides ongoing remote consultation to his colleagues at KATH and elsewhere. In 2015, Dr. Lalonde partnered with AAHS and Joshua M. Abzug, MD, of the University of Maryland, to develop a webinar series to provide an additional training resource to Ghanaian surgeons and hand therapists.

“[Between] September [and] June, hand surgeons and therapists share information across the Atlantic from the United States to Ghana on a weekly basis on Monday afternoons,” said Dr. Lalonde. “The usual challenges of internet communication sometimes [cause] hiccups, but both sides have persisted to the benefit of surgical and therapeutic hand care.”

In addition to the introduction of wide-awake surgery, the KATH-HVO partnership supports the continued growth of the trauma and orthopaedic residency program at the hospital. There are now five senior residents in training for fellowship at KATH, and the program has evolved into Ghana's second residency site for full qualification in trauma and orthopaedics. KATH also gained accreditation for its plastic surgery residency program, which currently has four residents.

“The hope is that the knowledge and patient care will spread to neighboring communities and countries,” said Dr. Lalonde. N

Katie McMullen is communications manager at Health Volunteers Overseas.



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