I am happy that SIGN has equipped 5,000 surgeons in 52 developing countries to perform hundreds of surgeries each day. Over the last 20 years, SIGN Surgeons have performed surgery on more than 240,000 patients, restoring their limbs to full function and keeping their families from spiraling further into poverty.

Our model of combining education with implants works! Whether the training is performed at our own conference in Richland or at regional conferences, such as the recent limb deformity courses lead by Dr. Richard Gellman in Nigeria and Kenya, SIGN Surgeons are eager to learn. By giving them the implants to treat the poor, the surgeons can immediately apply their new knowledge and provide many more patients with the hope of healing.

We are grateful to the SIGN Surgeons, to the consultants that provide the education and training, and to our donors who make these gifts possible.
My sole motive for visiting Achham, Nepal, in 2017 was to convince my husband, Dr. Mandeep Pathak, that a rural practice is detrimental for our family life. I wanted to convince him to come back to Kathmandu, the capital of Nepal, so that we do not have to stay apart because of our professional responsibilities.

My husband is the sole orthopaedic surgeon in the region. He works for Possible Health, an organization expanding healthcare to underserved communities, and partners with SIGN Fracture Care.

Need for Trauma Care

After an hour-long flight and a 12-hour ride by pickup truck, we reached Achham. The next morning Dr. Mandeep left early for the hospital, as he had patients to attend to. After breakfast, I reached the hospital and saw a huge number of people, as if there was a festival of some kind. After talking to hospital staff, I came to know all these people came for medical consultations. To my surprise, more than 500 patients were treated daily in the outpatient department, and among them a majority of the cases were trauma related. The hospital also carried out 20-25 orthopaedic procedures daily among which there were 4-5 major surgeries every day.

The far west of Nepal has very challenging terrain with narrow trails, steep hills, and mountainous ridges. Local people have no option but to climb and walk this trail. A patient with a fractured hip was carried in a small bamboo basket to reach the hospital; I could not believe my eyes.

I spent almost five hours in the nearby community talking to people and listening to their stories, and everyone shared their joy of having Dr. Mandeep, my husband, in Achham. Obviously, for people who can barely afford to have a single meal a day, having a hospital with an orthopaedic expert and receiving accessible, affordable, and accountable health care at a low cost is a boon.

Quality Instruments and Implants

Orthopaedic care is usually very expensive, and treating patients at a low cost made me question whether such a proposition was sustainable. I thought the donated implants from SIGN Fracture Care must be models that were no longer used in the US or were used implants.

I questioned my husband about the implants. Recognizing my doubts and hesitations to believe that the equipment sent by SIGN are new, my husband asked me to join him for the annual SIGN Conference in Richland, WA. It was a great experience accompanying him to the conference, where I met many intelligent and knowledgeable international experts (continued on page 3, “Seeing...”)
who shared the same commitment in improving the health of people and who were from different cultural backgrounds. This helped me to understand international and local orthopaedic trauma care issues and recognize that many other places in the world face the same challenges. Moreover, I was relieved when I visited their factory and came to know that the equipment they send to the developing world is all brand new.

Prioritizing Orthopaedic Care

In a country with limited resources like Nepal, it is quite obvious that bone and joint ailments are not prioritized in our primary healthcare system. Yet this is the problem that is most prevalent and has a disastrous effect on patients, especially the young adults, as it decreases their productivity, and will cost them a lot if they were to be managed at some private hospitals in an unknown city far from their home without known outcome. The government does agree on prioritizing orthopaedic trauma, but is lacking necessary policies and funds. Meanwhile, big organizations like WHO or UNICEF are providing support for other medical/clinical issues, but trauma care is yet to be prioritized.

It takes a person to be in the others feet to understand their problem. Dr. Lewis Zirkle, the founder of SIGN, himself was a war veteran and spent his time in Southeast Asia, so he could understand the problem of broken limbs in such resource-limited situations. He and his dedicated team, through enormous effort, lead SIGN to its current position, and I would like to congratulate everyone for their visionary work in this field. I often wonder what would be the condition of those people in these difficult situations with broken limbs if it was not for SIGN.

Dr. Mandeep and Dr. Pratikshya met Dr. Zirkle at the 2018 SIGN Conference.

Dr. Mandeep is the only orthopaedic surgeon in this remote region in northwest Nepal.

Donated SIGN Implants are helping patients heal!
SIGN Limb Deformity training continued this year in East and West Africa. Building on a successful course in Cameroon in 2018, where five surgeons from Nigeria traveled for training in Ilizarov techniques, this year I gathered two colleagues to teach a Limb Deformity Course in Lagos, Nigeria. Despite visa challenges, we all arrived in time to teach 14 surgeons from five teaching hospitals in Nigeria for a combined SIGN and Nigerian Limb Lengthening and Reconstruction Society advanced course.

Treating Complex Fractures

Our work focused on complex pediatric Blount’s deformities. Fortunately, Dr. Raymond Liu from Cincinnati’s Rainbow Children’s Hospital was there to offer his extensive experience in both lecture and operating room techniques. The host surgeon at Lagos, Dr. Emeka Izuagba, organized the lecture hall, Sawbones demonstrations, and operating rooms that included remote viewing and microphones on the surgeons. Dr. Kenneth Thomas, a trauma surgeon with training in Ilizarov and pediatrics from Anchorage, Alaska, was the third international faculty member to round out our team. We operated on three severe Blount’s cases, two children and one adult woman, allowing each of us to demonstrate our surgical techniques.

Generous Hospitality

Nigeria was in the middle of its rainy season, so we often took the shuttle bus to travel short distances around the hospital grounds to avoid being drenched, but the rain never dampened our spirits or that of our hosts.
The night before our departure, the hospital hosted a memorable dinner where Ray, Ken, and I wore custom-tailored Nigerian clothing which was made upon our arrival.

**Teaching Corrective Techniques**

From Nigeria, I traveled to Eldoret, Kenya, to teach a week long Ilizarov and Taylor Spatial Frame course to the attendings and residents at Moi Teaching Hospital under the direction of Dr. Lectary Lelei. While the surgeons in Nigeria were all experienced in Ilizarov techniques, most of the attendings at Eldoret had never placed an Ilizarov type external fixator. Fortunately, they were up to the challenge and ready to learn.

After two full days of lectures and Sawbones demonstrations, we dove into surgery, performing three complex Ilizarov frame applications and one acute valgus femur correction stabilized with a plate. Our last case, a 67-year-old woman with history of an open tibia shaft fracture had lost three inches of bone in her distal tibia. We placed her in a bone transport frame that will enable her to re-grow her tibia over the next six months.

**Continuing Education**

Unlike nail or plate fixation, the Ilizarov fixators require extensive follow-up and frame care. I continue to monitor patients through the dedicated residents at Moi, like Dennis Rono and Nelly Maoga, on WhatsApp or by email.

I look forward to continued teaching in Eldoret and Nigeria. Next on the agenda is a Deformity Pre-course to be held the day prior to the SIGN Conference for seven surgeons from Nigeria, Kenya, and Cameroon. They will then be ready to assist me during the SIGN Conference to lead demonstration tables on their own, making our teaching for this year the best ever.

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**Trip Notes**

*From Dr. Raymond Liu*

I had a wonderful trip to Nigeria! Dr. Emeka Izuagba and his team were very gracious hosts. I was intrigued to learn about the methods that the Nigerian surgeons have developed to address limb deformity, and I tried to find ways to incorporate the methods that I have learned into their system. I hope that I was able to pass on as much knowledge to them as I gained. This trip has really inspired me to think of new ways that I can help with the education of surgeons abroad.

*From Dr. Kenneth Thomas*

Excellent deformity course. The surgeons were very engaged. We had a lot of interactive discussion.
Coming Soon... check out our new website later this summer!

You are invited!

Save the Date
September 11-14
2019 SIGN
INTERNATIONAL ORTHOPAEDIC CONFERENCE
Richland, WA

Contact SIGN
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Join us as we WINE & DINE for SIGN. Enjoy a fun evening to benefit SIGN Surgeons and Patients around the world. Help heal thousands of people worldwide by attending one of the benefits supporting SIGN Fracture Care International.

Purchase Tickets
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