The SIGN Family gathered on April 19 to celebrate SIGN Fracture Care’s 20th Anniversary. Thanks to the support of generous donors and the skill of dedicated surgeons, SIGN Implants have been used to heal the fractures of more than 238,000 people. We are grateful to have helped so many, but more people need more help in more ways.

The First Mountain
Dr. Zirkle recalled a speech by Nelson Mandela, which he loosely quoted: “I climbed a mountain looking for a rest. I was tired, but when I came to the top of the mountain, there was another mountain to climb.” SIGN has been climbing the mountain of long bone fracture care for 20 years, Dr. Zirkle said. We have largely solved the problem of how to treat those injuries, though we are still learning and improving, and there is room for significant growth.

The first steps of the journey occurred in 1997 when Dr. Zirkle met with Randy Huebner, the founder of Acumed, a medical implant company. “I left completely thrilled with the opportunity to design products that purely served patients,” said Mr. Huebner a longstanding SIGN Board Member. “And the other part is being able to design things that are sold in the United States for $1,500 for $150. As an engineer, it was impossible to not try and do that.”

Acumed helped design and produced the first SIGN Implants and Instruments, which Dr. Zirkle took to surgeons in Vietnam. In the 20 years since, SIGN Surgeons and Engineers have refined the process of surgery and the products we create to effectively treat long bone fractures for people in developing countries.

The Next Mountains
We have reached one peak, but that has revealed another mountain—indeed a whole range of mountains—to climb. In addition to long bone care in developing countries, SIGN Surgeons have identified continued improvements in our core procedures, pelvic fractures, deformity correction, and spine fractures as the next challenges.

The next mountains will be difficult, but we can build on what we have learned climbing the first mountain.

“There’s a bridge from the first mountain,” Dr. Zirkle said. “The bridge is the SIGN Database, where we keep records of all the surgeries, and we’re getting more and more follow-up records to know how the patient really does.” Because we have a baseline for healing success and the knowledge of how we’ve achieved it, we are well-placed to take on these new challenges.

SIGN Surgeons Lead the Way
“Training a surgeon to put in a SIGN Nail is a beginning. (Continued on page 3)
Thanks to the support of donors like you, SIGN has helped heal 238,000 people with SIGN Surgery.

SIGN Machinists demonstrated how they create SIGN Instruments and Implants.

SIGN Engineers demonstrated SIGN Surgery and new products they are developing.

Lana Grieb, a SIGN Machinist, drew “The Man in the Bed” who inspired Dr. Zirkle.

Interactive displays showed where and how SIGN works around the world.
It’s an initial confidence builder. It creates this worldwide community of mentorship, and local surgeons feed off each other,” said Dr. Richard Gellman.

Dr. Gellman is an orthopaedic surgeon from Portland, OR, SIGN Board Member, and provides training at the annual SIGN Conference and around the world in deformity correction—one of SIGN’s next mountains.

SIGN Surgeons are already leading the way up the next mountains. With guidance from Dr. Gellman, many SIGN Surgeons are tackling complex limb deformity corrections that help some patients walk normally for the first time in their life. SIGN Surgeons in Ethiopia have started a pelvic fracture fellowship—the first program of its kind in Africa.

“The influence of SIGN over the last 20 years goes beyond the 200,000-plus patients that have had their lives restored by SIGN Implants,” said Dr. David Shearer, an orthopaedic surgeon at UCSF and SIGN Board Member.

“Beyond that, SIGN is a thought-leader in education and is an inspiration for a lot of aspiring young humanitarians across the world.”

“Personally, I feel incredibly lucky to have had the opportunity to witness SIGN’s work and to try to follow, in some degree, the path that Dr. Zirkle trailblazed,” Dr. Shearer added.

Thank you for climbing this first mountain alongside us. Please join us at the next summit.

If you weren’t able to attend the 20th Anniversary, you’ll be able to see and learn more about SIGN’s history and future at the Open House on July 17 or the Wine and Dine for SIGN events in Portland on Sept. 21 and Tri-Cities Oct. 12. Mark your calendars now!
Education that Empowers: The SIGN Model at its Best

Educating Surgeons
SIGN Fracture Care’s work starts with education. We provide educational opportunities for surgeons in developing countries. As our programs have expanded, so has the scope of SIGN’s education. Now, in addition to teaching SIGN Surgery, we provide education in a number of orthopaedic procedures, enabling SIGN Surgeons to care for more people in need.

Dr. Subir Hossain, from Bangladesh, attended the 2018 SIGN International Orthopaedic Conference. One of the procedures he learned was the masquelet technique for treating severe injuries that leave gaps in the remaining bone.

The Need
Soon after the conference, a 20-year-old woman named Lipi came to his hospital, and she begged for her leg to be amputated. Three years earlier, she had a fractured femur that was treated with a commercial intramedullary nail, but it became infected. She went through four rounds of surgeries, using another intramedullary nail, an external fixator, and a plate, but each procedure created more complications.

After all this, her bone was not properly aligned, her knee was totally stiff, and her leg was three inches shorter than it should have been. She decided that amputation was her best option, because she was psychologically and economically broken.

Donated Implants
Dr. Hossain convinced her to try one more surgery with a free SIGN Nail. He used the masquelet technique that he learned at the SIGN Conference to extend the bone around the SIGN Nail. One month later, he completed the procedure and inserted a bone graft to return her leg to the correct length.

A Limb and Life Restored
Lipi is now able to walk with a crutch, and her x-rays show that her bone is healing. “She was so happy that she cried,” Dr. Hossain says. “After four years, she can walk with both limbs.”

You can help send a surgeon like Dr. Hossain to the SIGN Conference. You can help them learn new procedures that save limbs and transform many lives. Please use the attached form, or text CONF2019 to 41444.

You can empower a surgeon with a Scholarship

- $200 1-Day Scholarship
- $800 Full Conference Scholarship
- $2,000 Travel Scholarship

Your gift helps a surgeon learn and provide more effective care for their patients! Complete the donor card on the back or go to signfracturecare.org/2019Conference
The SIGN International Orthopaedic Conference provides a unique educational experience for surgeons. It is the only orthopaedic conference focused on issues faced by surgeons in developing countries. The conference is built around hands-on learning, helping surgeons to develop their practical skills as well as increasing knowledge.

### Bioskills Lab

A bioskills lab provides the closest simulation to a live surgery. Under the guidance of experts from around the globe, SIGN Surgeons are able to experiment with new techniques and procedures—putting what they are learning into practice.

### Deformity Correction

Dr. Richard Gellman leads a course on correcting bone deformities, teaching SIGN Surgeons how to care for patients with disfigured limbs.

### Pelvic Fractures

Many SIGN Surgeons have become experts in specific areas of orthopaedic surgery, such as Dr. Sami Hailu in pelvic fracture surgery. He shares his knowledge and experience by leading a discussion about pelvic fractures.

### SIGN Equipment

SIGN Surgeons work together using SIGN Equipment and simulated bones. The surgeons, who hail from 30 different countries, teach each other techniques for effective and efficient SIGN Surgery.
Thank you!

Your donations of OVER $45,000 started 2 new SIGN Programs!

2-day give BIGGER

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

Contact SIGN
P: (509) 371-1107
F: (509) 371-1316
info@signfracturecare.org
signfracturecare.org

Save the Dates

SIGN Open House
July 17, 2019
4:30 - 6:30pm
20th Anniversary Celebration Displays

WINE & DINE for SIGN
September 21, Portland, OR
Portland Art Museum

October 12, Tri-Cities, WA
Three Rivers Convention Center