

SIGN Fracture Care 2023& Highlights

SIGN by the Numbers

25 New SIGN Programs

25,799 Patients Healed in 2023

423,250 Patients Healed since 1999

Programs

reporting the most SIGN Surgeries

in 2023

1,029 Cambodia: Kossamak Hospital

713 Tanzania: Muhimbili Orthopaedic Institute

652 Tanzania: Dodoma Regional Referral Hospital

484 Malawi: Kamuzu Central Hospital

321 Myanmar: Yangon General Hospital

277 Cambodia: Calmette Hospital

272 Ethiopia: Soddo Christian Hospital

267 Bangladesh: Rajshahi Medical College Hospital

259 Kenya: St. Orsola Hospital Matiri

259 Ethiopia: St. Paul Hospital



SIGN Looks Ahead

By Jeanne Dillner, SIGN CEO

Those of us who have been with SIGN since its inception on January 29, 1999, have seen our organization transform from a dream into the reality that we jump-started orthopaedic surgery in low- and middle-income countries (LMIC).

We are 25 years into this effort and find that impoverished people still get injured and cannot afford implants. Hospitals in LMIC still don't have the resources to buy orthopaedic implants in their budgets. Therefore, SIGN still needs to supply implants for free.

We are grateful for SIGN Surgeons who partner with us to help the poor, and for our donors who entrust their hard-earned money to us to give healing surgery. With these efforts combined, patients continue to return to full mobility and are moving on the path out of poverty.

We are fortunate to partner with the Institute for Global Orthopaedics and Traumatology, University of Washington, Washington State University Tri-Cities, Case Western Reserve University, and others to give SIGN Surgeons access to training in trauma, limb deformity correction,

flaps to cover wounds, and research that affirms the quality of SIGN IM Nail outcomes.

As we think into the future, long bone fracture care will remain at the center of the educational materials and products that we will make available. The SIGN Board and Management are spending time looking into other opportunities we can give SIGN Surgeons, so that they can provide even better care to their impoverished patients.

Below are highlights of projects we envision for 2024 and beyond:

Board Development

The SIGN Board and Management want a more formal representation from SIGN Surgeons in the design of new and existing products, as well as educational offerings.

We are pleased to announce that we have a SIGN Surgeon on our board. Dr. Daniel Sciuto joined the SIGN Board in October 2023. He performs orthopaedic surgery in Samburu, Kenya, and kindly serves as faculty at SIGN Conferences here at HQ and in Africa. The board is in the process of making other structural



Dr. Daniel Sciuto, a new SIGN Board Member, helped teach deformity correction in Tanzania.

changes to allow for more input from SIGN Surgeons. Further developments will be announced later this year.

Trauma Fellowships

Drs. Geletaw Tessema and Samuel Hailu, SIGN Surgeons at Black Lion Hospital in Ethiopia, offer trauma fellowships for surgeons in Ethiopia and other East African countries. This is the first fellowship of it's kind in the region, and helps dedicated and talented surgeons keep working in their home communities. (Continued on page 3)



Conferences in Tanzania (left) and Richland (above) provided hands-on learning and opportunites for SIGN Surgeons to teach their colleages.



SIGN Surgeons in Nigeria learned to correct limb deformities with ring fixators.

(Continued from page 2)

Bone Deformity Correction

SIGN Board Member Dr. Richard Gellman has been working with other US surgeons to give courses in Africa on bone deformity correction. These courses include a supply of ring fixator devices that have been donated to SIGN.

SIGN Spine Progress

The SIGN Spine project is primed to start at two sites in 2024.

Dr. Geofrey Ngetich is attending a spine fellowship at McMaster University in Canada and expects to return to Moi Teaching and Referral Hospital (MTRH) in Eldoret, Kenya, in June 2024. The hospital is finishing construction on a new operating room dedicated to spine cases. SIGN partner Medtronic is donating enough implants to perform 500 spine surgeries over a two-year period. These cases will be reviewed by mentors from Canada and the US, and a study will be conducted on the data and published.

A longtime partner with SIGN in long bone fracture care, Muhimbili Orthopaedic Institute in Dar es Salaam, Tanzania, has qualified spine surgeons on staff. They need access to free spine implants because most of the patients they treat cannot afford to purchase them. They have agreed to join

the same study as MTRH in Kenya. We already have the implants and instruments and will ship as soon as the Institutional Review Board approves the study.

The spine implants and instruments have been funded by generous support from the Ortholndy Foundation and others. We have reduced costs through discounted pricing and donation of Medtronic devices. SIGN is working with the Hospital for Special Surgery to test devices that can be purchased in LMIC to ensure safety, effectiveness, and lower costs in the future.

Thank You

We are grateful to everyone who has supported us these 25 years. We are eager to take a leap into the future with you, to continue spreading our vision of creating equality of fracture care.



Surgeons practiced spine surgery at the 2023 SIGN Conference.



may not have heard about us. Please share any ideas you may have with me at lori.maier@ signfracturecare.org.

Also, do you work at a company that matches their employees' donations? I encourage you to check with your HR department. What a great way to double your donation and help twice as many patients. It is usually a very simple process.

Watch your email for an introduction of our new partnership with FreeWill. Soon we will also be announcing the date of an Open House celebration, where we will gather together and celebrate the past, see upgrades in our manufacturing shop happening this spring, and look to the future.



25 Years of fealing

The Man in the Bed

SIGN Founder, Dr. Lewis G. Zirkle, became aware of medical needs in lowincome countries while serving in the US Army in

Vietnam. Upon starting his private

orthopaedic practice, Dr. Zirkle spent one month each year teaching surgeons in Indonesia and collecting hospisend to them.

In 1996, upon returning to a hospital years after initial training, Dr. Zirkle found a patient with a fractured femur who had been lying in traction for three years. Dr. Zirkle questioned the doctors because he had taught them how

to treat this man's injuries.

They responded that they did not have the proper equipment for surgery, and this man could not afford to purchase the implant he needed.

In that moment, Dr. Zirkle realized that teaching surgical techniques

> was not enough. He also needed to supply surgeons with orthopaedic instruments and implants that were appropriate for their hospital settings.

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events that have inspired this journey as a means to celebrate, to re-affirm our mission to create equality of fracture care throughout the world,

for the last 25 years.

25 on January 29, 2024!

For 25 years you have helped us

provide healing surgery for more

than 423,000 injured people in low-

and middle-income counties. That

averages out to 46 people per day

receiving SIGN Surgery, every day

Throughout this year, we will be

looking back at the people and

SIGN Turns

and to guide our path for the next 25 years and beyond.

Searching for Solutions

Dr. Zirkle tried to convince commercial implant companies to design a lowcost intramedullary implant system for use in low-income countries. (Continued on back.)

Your gi

provides instruments and implants so surgeons can help injured patients heal.

Donate today! Use this form or text SIGN to 91999 or go to signfracturecare.org/donate





Randy and Mary Huebner

(Continued from front.) Many were intrigued by the idea but, as he says, "They would never say yes, and they would never say no."

In 1998, he presented the need to the founders of Acumed, Randy and Mary Huebner. They believed the project was worthwhile and offered to manufacture the first implants and instrument sets as a pilot.

Dr. Zirkle took these first designs to Vietnam, where surgeons were pleased with the implants and suggested improvements.

SIGN Founded

Dr. Zirkle returned home after the successful trip and decided to start up his own non-profit medical device 25 Years of Healing

company to create and donate the needed instruments and implants. His main goals were twofold. First, to manufacture devices that surgeons in low-income countries could use without the need for expensive equipment or even electricity in the operating room. Secondly, all the products must be donated, so that impoverished patients could afford the care they needed to recover from a bone fracture.

The vision to create equality of fracture care throughout the world was now in motion.

We hope you enjoy this journey back through SIGN's history as we move through 2024. There will be a highlight in each newsletter, bonus email messages, and social media posts. If there something you are interested in learning more about, email us at info@signfracturecare.org



Vietnamese surgeons reviewed and tested the first SIGN Sets, and provided invaluable feedback.



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January 2024

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