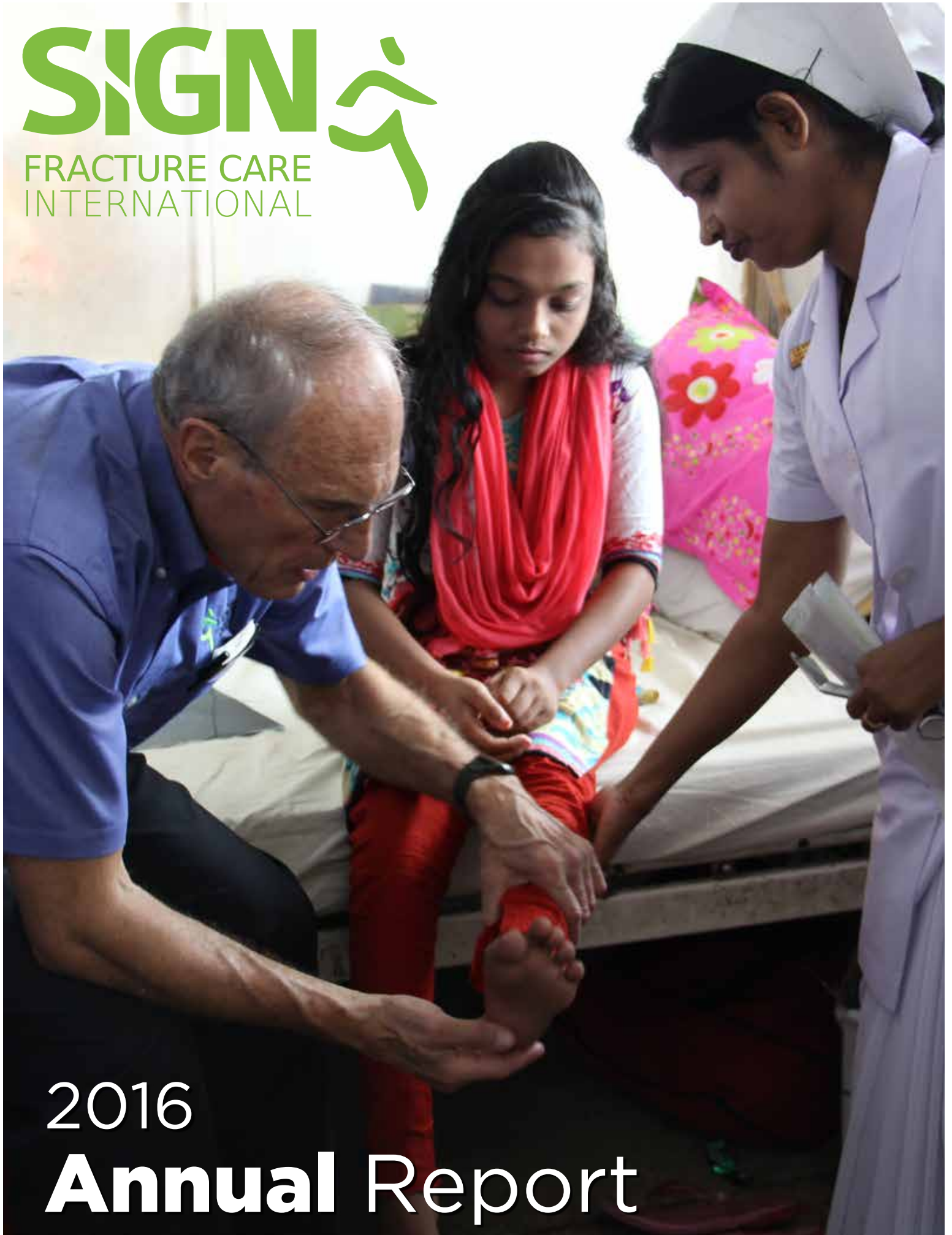


SIGN

FRACTURE CARE
INTERNATIONAL



2016

Annual Report

SIGN Mission

To give the injured poor in developing countries access to effective orthopaedic care by providing surgeons in low resource hospitals with relevant orthopaedic education and implants.



Yangon General Hospital, Myanmar

President's Message



The SIGN Vision of creating equality of fracture care throughout the world has many implications. We believe that all people have absolute value, although all do not have equal abilities or opportunities for employment and education that we in the United States take for granted. We must, therefore, enable SIGN Surgeons to treat all patients.

An injury that causes pain, prevents you from walking, keeps you awake at night, and thwarts your ability to work would be a disaster—no matter who you are or where you are from. SIGN supplies the education and the implants to enable local surgeons to treat these injuries for people who could not otherwise afford proper treatment.

SIGN Surgeons are caring for increased numbers of patients. They strive for the best results possible, just as

surgeons in the United States do. However, they must operate in austere environments without the equipment we have. SIGN Innovations are designed to provide faster and more efficient surgery so more patients can be treated.

We started 30 new programs in 2016. We innovated a new plate to be used with SIGN Nails and compression screws to provide fixation for difficult fractures. We are designing new instruments to increase the speed of fracture healing by mechanically stimulating stem cells of cortical bone.

We are in the early phase of designing a novel plate system to treat fractures that involve joints. These fractures cause great disability if not treated properly. This system will involve instruments to bend and conform plates to the bones of individual patients.

Our future plans include better ways to educate SIGN Surgeons. Leaders are emerging in developing countries who teach SIGN Surgery to their fellow surgeons in different hospitals. We want to pass on our educational techniques to them.

We are grateful to the many people who help us in so many ways.

Lewis G. Zirkle M.D.

Lewis G. Zirkle, M.D.
SIGN President and Founder

Road Traffic Accidents

Road traffic accidents are on the rise. This is especially true in developing countries, where rising incomes enable families to purchase a motorbike. While increased mobility is good, motorbike drivers and passengers are at an increased risk of severe injuries from traffic accidents. Many of these

crashes cause multiple broken bones and require the patient to be hospitalized.

Hospitals in developing countries are struggling to keep up with the rising number of trauma injuries, and their wards are overflowing. A patient with

a broken femur can lay in traction for two to three months waiting for their bone to heal. But with SIGN Surgery, the same patient can return home within a week of the procedure, freeing up valuable space in the hospital and enabling the patient to return to their family and work.



50

million people are injured in road traffic accidents every year

—World Health Organization

Bangladesh

Education in 2016

SIGN Conferences are a unique educational experience. Many orthopaedic conferences are focused on the newest technological innovations, which are not relevant for surgeons in the developing world. But the SIGN Conference emphasizes surgical techniques that can be performed in low resource conditions. Speaking at the conference allows SIGN Surgeons to present their research and receive immediate feedback from their colleagues, which helps everyone in attendance learn more. The hands-on sessions allow surgeons to try out what they are learning and improve their surgical skills. Three SIGN Conferences were held in 2016—at SIGN Headquarters in Richland, WA, in Ethiopia, and in Tanzania.

147

SIGN Surgeons from around the world attended the annual SIGN Conference in Richland, WA



Dr. Aung, Myanmar



Dr. Aung during surgery

Professor Aung Thein Htay is the SIGN Program Manager at Yangon General Hospital and in charge of the orthopaedic residency program in Myanmar. He is expanding the residency program to meet the rising need for surgery in the country.

Yangon General Hospital used to be the only SIGN Program in the country, but as residents are graduating, Dr. Aung is helping SIGN expand to the hospitals where these surgeons are assigned. SIGN added four new programs in Myanmar in 2016, and has plans to open more in the coming years. We are grateful for Dr. Aung's leadership and advocacy for impoverished patients.

5,000

SIGN Surgeons globally



Doctors during rounds at Yangon General Hospital

Kyaw, SIGN Patient

Kyaw, main breadwinner for his family

At only 17 years old, Kyaw is the principal breadwinner for his family of five in rural Myanmar. Driven by the family's economic need, Kyaw quit school after the third grade to begin working. His father occasionally works farming another landowner's field. His mother, who is visually impaired, cannot work outside the home.

While making deliveries on a motorcycle, Kyaw was in an accident that broke his right femur. This injury prevented him from working, putting his entire family at risk. Kyaw was rushed from his rural village to Yangon General Hospital, which sees most of the country's trauma cases. The doctors determined that SIGN Surgery would be the best treatment, and Kyaw's family was able to afford the treatment because the SIGN Implant was donated.

"He made a quick recovery and was able to walk with normal activity level in less than three weeks," says Dr. Aung, the Head of Orthopaedics at Yangon General Hospital. Eight weeks after his SIGN Surgery, Kyaw was back to work in a small rice noodle factory where he operates the physically demanding noodle press, requiring the full flexibility and strength of his legs. Kyaw works about five hours a day, seven days a week, to earn \$100 a month to support his parents and two younger sisters. When he is not making noodles, he collects water for the family and helps his mother in the kitchen.



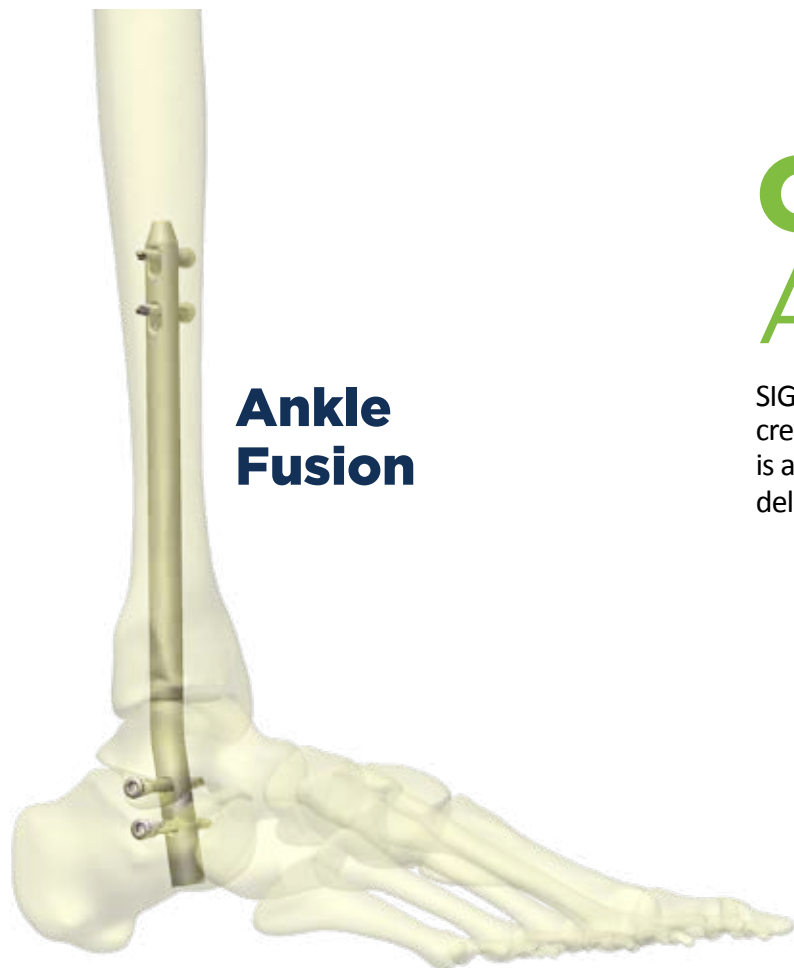
Kyaw at work

SIGN Instruments

SIGN designs, manufactures, and distributes surgical implants and instruments to surgeons in developing countries. The SIGN System is designed for use in low resource hospital environments and do not require the use of expensive real-time x-ray machines or even electricity.

In January 2016, SIGN received US Food and Drug Administration (FDA) clearance for using Compression Screws to treat femoral neck fractures. SIGN Engineers and Machinists continue to improve the instruments and implants of the SIGN System in order to treat more types of fractures and make surgery more efficient.

In 2016, SIGN submitted a new technique for ankle fusion using SIGN Implants to the FDA.



Ankle Fusion

Quality Assurance

SIGN Instruments and Implants, and the processes used to create them, meet all relevant regulatory requirements. SIGN is annually audited to ensure that our products and systems deliver high-quality products to every patient.

Standard Nail & Screw



Fin Nail



Hip Nail, Plate & Screw



Pediatric Nail & Screw



Bone Grafts & Stem Cells

Studies indicate that cortical bone contains stem cells and imparting mechanical energy to shave or grind the bone into small particles stimulates the stem cells and promotes fracture healing.

SIGN is developing a bone graft

system that includes intramedullary reamers, a reamer flute scraper, and a bone mill to utilize the patient's own bone healing material. We released a new reamer design in 2016 that allows the surgeon to collect

cortical bone shavings containing stem cell particles while preparing the patient's bone canal for SIGN Nail insertion. The Bone Mill is being developed to grind larger bone fragments for bone graft.



New Reamer



Old Reamer



Scraper



Bone Mill

Dr. John, Uganda



Dr. John reviews x-ray of a SIGN Patient.

Dr. John Ekure studied medicine at Makerere University in Kampala. His home community, Kumi, rallied together to support his education following the death of his mother, a beloved midwife.

Upon completing his training, he returned to Kumi to give back to the community that supported him.

He founded Kumi Orthopaedic Center in 2011, and has been caring for local patients as well as those from conflict areas in the Democratic Republic of the Congo and South Sudan. In 2016, Dr. John and his staff performed 113 SIGN Surgeries.

“I love serving the poor, because I can change their lives through the work I do,” Dr. John says.

30

New SIGN Programs started globally in 2016



Doctors during daily rounds at Kumi Orthopaedic Center

Juliet, SIGN Patient



Julie Atai, thankful for SIGN and Dr. John

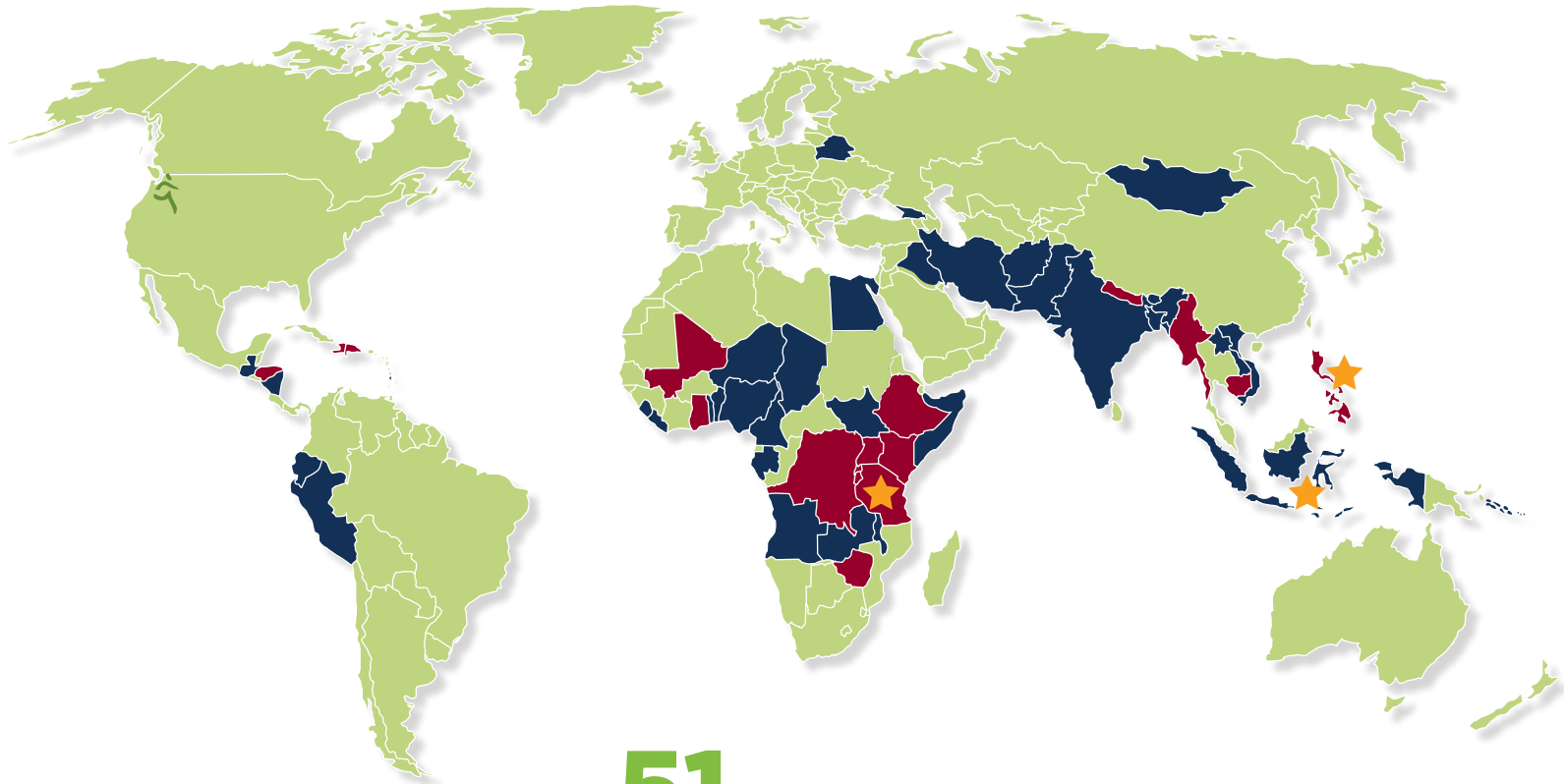
Juliet, 30, was traveling in a taxi when the driver lost control and crashed into a hotel. Her leg was broken and her fingers crushed in the accident. She was rushed to a local hospital and transferred to Kumi Orthopaedic Center the next day.

“When I saw the x-ray and I saw my femur was broken, I was worried that I couldn’t walk again,” Juliet recalls. “I thought they would either amputate my leg or when I recover I’ll walk while limping.”

But her worries were calmed by Dr. John Ekure, who told her that a SIGN Nail was the ideal tool to treat her fractured femur. Dr. John performed SIGN Surgery, and Juliet was walking on crutches the following day. Juliet is grateful for the quick recovery that SIGN Surgery enables. “I have one daughter,” she says. “Now that I can walk, I think we shall even start running together.”



Where **SIGN** Works



51 Countries with SIGN Programs

Legend



Headquarters



Countries with new programs in 2016



Countries with programs



Locations of disasters responded to in 2016

Emergency Response

In 2016, several SIGN Programs were affected by an earthquake, a hurricane, civil unrest, and war. SIGN responds to emergencies by helping local surgeons prepare for every situation.

Our mission is to give the injured poor in developing countries access to timely and effective orthopaedic care. We accomplish this by equipping local surgeons with orthopaedic education and implants. SIGN Surgeons are prepared for daily injuries caused by road traffic accidents and other sources of trauma.

These same skills and tools are required when a disaster or conflict arises, and SIGN Surgeons are ready to respond immediately to the increased load of patients.

When an event occurs, we email surgeons in the affected areas and ask what help they need. In most cases, the local surgeons are well equipped and do NOT need additional hands. Following earthquakes in Tanzania and Indonesia and a terrorist bombing that injured dozens in Davao City, Philippines, the

local surgeons were prepared with an inventory of SIGN Implants and only needed us to send replenishments.

These responses validate the SIGN Model. The surgeons are based in their home communities around the world, they are already in place when a disaster strikes, they know what to do, and they have the tools and implants needed to provide excellent trauma care.

SIGN Financial Info

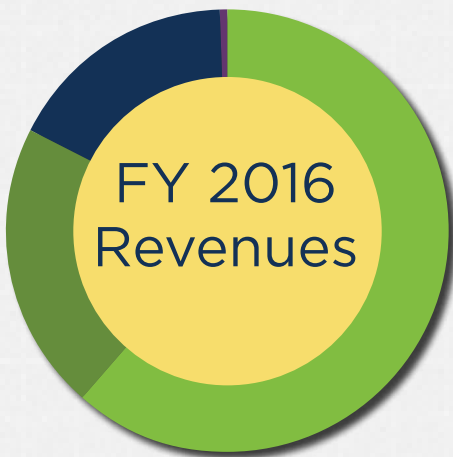


Stewardship of Resources

We are deeply grateful to the donors and foundations who support our vision of creating equality of fracture care throughout the world. The gifts

we receive are used to ensure that surgeons in developing countries have access to relevant education and training and a consistent

inventory of implants and instruments to care for their patients. Our financial records are audited annually by an independent CPA firm.



Revenues

■ Donations & Grants	\$3,898,615
■ Gift-in-Kind Contributions	1,325,033
■ Implant Revenue	1,066,347
■ Other Revenue	32,558
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Total Revenue	\$6,322,553

Expenses

■ Program Services	\$4,869,834
■ Management & General	352,283
■ Development	319,257
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Total Expenses	\$5,541,374



Net Assets

Ending Net Assets \$12,054,760

88%

SIGN Programs

In 2016, 88% of expenses directly supported SIGN Programs.



SIGN Officers & Board of Directors

Lewis G. Zirkle, MD
President & Founder
Chairman of the Board

Jeanne Dillner,
CEO, Secretary/Treasurer

Teresa Ford

Richard Gellman, MD

Randall Huebner

Stephen Schwartz

Carla Smith, MD, PhD

John Staeheli, MD

David Whitney, MD

Frederic Wilson, MD

Patrick Yoon, MD

SIGN Staff



CEO Message

*None of us are as good alone
as we are with an amazing team of people.*



SIGN is a global team of staff, surgeons, volunteers, and donors—all of whom have made long-term commitments to furthering our mission of treating the injured poor.

We are expanding SIGN Programs, Implants, and educational opportunities for SIGN Surgeons, which causes us to examine our staffing needs. With each new program, implant design, or educational opportunity, we ask ourselves whether our staff has the proper experience, training, and the tools to support these endeavors. 2017 will bring more new product designs, requiring enhanced project management and communication skills within our Engineering Department. With travel becoming more challenging for many SIGN Surgeons, we continue to explore on-line consultation and educational opportunities to meet their needs. To address the challenge of these initiatives, we will bring on two new managers in 2017—one in Engineering and the other in Information Technology (IT).

Open communication amongst departments is critical to achieving incremental and innovative product and process improvements. One example of the collaboration found at SIGN Headquarters is in the Program Office (PO), which coordinates daily communications with 300 SIGN Programs. The PO will take advantage of expanding IT expertise to automate registration of the SIGN Conference and other PO communications.

I am proud of the fact that all of our staff are motivated to respond to the need we see for orthopaedic trauma care worldwide. They are equipping themselves to provide better support to the SIGN Surgeons so that they can provide effective and timely care to the SIGN Patients.

Dr. Zirkle and I are grateful to our donors, our board, the SIGN Surgeons, and to our dedicated staff for joining us in our commitment to create equality of fracture care for the injured poor.

A handwritten signature in black ink that reads "Jeanne Dillner".

Jeanne Dillner
CEO



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180,000+

SIGN Patients treated since 1999