

## Healing Hope in Uganda

By Ryan Smith, SIGN Communication Specialist

Hope, a police detective in Uganda, was riding home from work on a motorcycle and was hit from behind by a speeding car. She was thrown to the ground and sustained a compound fracture in her right tibia. At a local hospital, the surgeon chose to use an external fixator to stabilize her broken bone due to fears of infection. But when it was removed six weeks later, Hope's tibia had not healed.

She turned to a traditional bonesetter for care, who treated her injury with massage and physiotherapy. After months of treatments, Hope was still in pain and could not squat or run, which was preventing her from working. On the advice of her mother, she reached out to Kumi Orthopaedic Center.

Dr. John Ekure met with Hope and showed her that her bone fragments had not healed in the correct alignment, which was causing her pain and had shortened her leg. He used a donated SIGN Nail to straighten and lengthen the bone, stabilizing it and enabling proper healing.

"I was told to walk on Day One after surgery, and I thought the doctor was joking," Hope recalls. "I was very excited but anxious. Indeed, I walked on Day One with the aid of crutches." She returned home after a few days with a renewed sense of joy.

"When I came for my first review six weeks later, the x-ray showed very good progress. I could now squat for the first time after a year," Hope says. "My life is returning to normal, and I will only have scars to tell the story."

**You can provide surgery that does more than heal a broken bone — it restores a person's ability to walk and work. Give today at [www.signfracturecare.org/donate](http://www.signfracturecare.org/donate)**

**SIGN Surgery helped Hope return to work after other treatments failed.**



# A Light in the Darkness: SIGN's Sustainable Solution for Underpowered Hospitals

By Eric Sargent, SIGN Grant Coordinator

Modern healthcare is often reliant on computer systems and other technology to provide patient care. This means having access to sufficient and reliable electricity is crucial to making essential medical services available, which in turn leads to better community health outcomes. However, for many people living in low- and middle-income countries (LMIC), there is still a great need for basic access to something we take for granted.

An estimated 1 billion people are served by healthcare facilities that lack reliable access to electricity according to a new World Health Organization report, "Energizing health: accelerating electricity access in health-care facilities". The disparity is most evident within South Asia and sub-Saharan Africa, where roughly 1 in 7 medical centers have no electricity available at all, especially in rural areas. Around two-thirds of healthcare facilities in 63 LMICs need urgent intervention — either a new connection or a backup system to shore up unstable local electric services — at a cost estimated at \$4.9 billion USD.

While a considerable amount of international humanitarian aid has been spent on immunization efforts and primary healthcare, access to electricity for LMIC health systems has been largely overlooked. Often, inadequate local government spending on infrastructure or availability of resources are cited as barriers to extending electricity to underserved areas.

*Dr. Zirkle and the SIGN Surgeons he worked with knew **lack of reliable electricity was a key factor when creating the first SIGN IM Nail System.***

But with recent advances in alternative energy sources like solar panels, cost-effective, clean, and rapidly deployable solutions are currently available.

However, electricity supply is only one part of the equation. The report



**SIGN Surgeons are able to perform surgery without power in the operating room, using tactile feedback and supplementary lights (2017).**

also advocates for investments in energy-efficient medical devices. Specifically, they point to, "the need for design and procurement of more robust, energy-efficient, low-maintenance medical equipment ... resilient to factors such as high temperatures and dusty environments".

This statement perfectly describes the design and functionality of SIGN Instruments and Implants. Dr. Zirkle and the SIGN Surgeons he worked with knew lack of reliable electricity was a key factor when creating the first SIGN IM Nail System. A patient with a fractured limb can be treated without the use of real-time x-ray imaging or other equipment dependent on a power source, as the surgeon relies on tactile feedback instead. Even post-operative results can be measured with no equipment, using the "squat and smile" pose to demonstrate patient healing.

While world leaders and healthcare policy makers continue to work towards universal access to electricity for LMIC hospitals, SIGN's definitive approach to long-bone fractures will continue to meet the needs of trauma patients in underserved communities while contributing to the energy solution.



**SIGN Surgeons received headlamps, donated by Leatherman Tool Group at the 2018 SIGN Conference, to help with surgery during power outages.**



# SIGN Looks Ahead

By Jeanne Dillner, SIGN CEO

After three years of COVID restrictions, 2023 is shaping up to be the year we can restart many of our hands-on activities, like regional conferences and fundraising events. It's odd for this self-proclaimed introvert to say this, but I am sincerely looking forward to traveling, seeing our friends, and catching up with you all in person.

With the success of the 2022 SIGN Conference to bolster our confidence, Dr. Zirkle and I plan to travel to Dar es Salaam, Tanzania, in June to attend a regional SIGN Conference, jointly organized by Muhimbili Orthopaedic Institute, SIGN, and the Institute for Global Orthopaedics and Traumatology. Then in October, we will hold our annual SIGN Conference in Richland.

We are pleased that so many of you have continued to support us throughout the pandemic. To honor your support, we will hold a donor and volunteer appreciation event in April. We will resume our Tri-Cities annual fundraiser in October.

We celebrated the 400,000th patient treated with the SIGN Nail on January 29th of this year. The SIGN Nail will continue to be our core product and main source of orthopaedic healing. We are also constantly innovating, with the first SIGN Spine program starting this year at Muhimbili Orthopaedic Institute. In addition, a surgeon from Moi Teaching and Referral Hospital in Eldoret, Kenya, will begin his spine fellowship at McMaster University in Canada in July 2023. He will return to Eldoret in July 2024 to begin the SIGN Spine program there.

**We will be celebrating our 25th anniversary in 2024.** Many SIGN Surgeons and our employees have been with us since the early years. We will continue to work on building up leadership amongst the SIGN Surgeons and within the walls of SIGN HQ. These leaders will take us

into SIGN's future. They are eager to enhance our model of combining education with donation of implants to provide equality of fracture care so that hundreds of thousands more patients can be healed.

The successes of 2022 and the plans we have made for 2023 and beyond are only made possible because of the generous and continuous support of our donors, the commitment of our board and our staff, and the tireless and talented SIGN Surgeons who go to work every day ready and equipped to treat injured and impoverished people. We are grateful to all of you for joining our journey of healing.

***SIGN Surgeons and Staff teach each other and drive us forward, as seen here in scenes from the 2022 SIGN Conference.***





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# How You've Helped This Year...

As of Feb. 2023

**5,032**

Patients Healed

**3** SIGN

Programs Started

**70** Hospitals received implants

**24** Countries

have been sent shipments

**2** SIGN Trauma

Session Webinars

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